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Substance Abuse and
Mental Health Services
Administration

Center for Substance Abuse Treatment

Guidelines for the Treatment of Alcohol- and Other Drug-Abusing Adolescents

Treatment Improvement Protocol (TIP) Series

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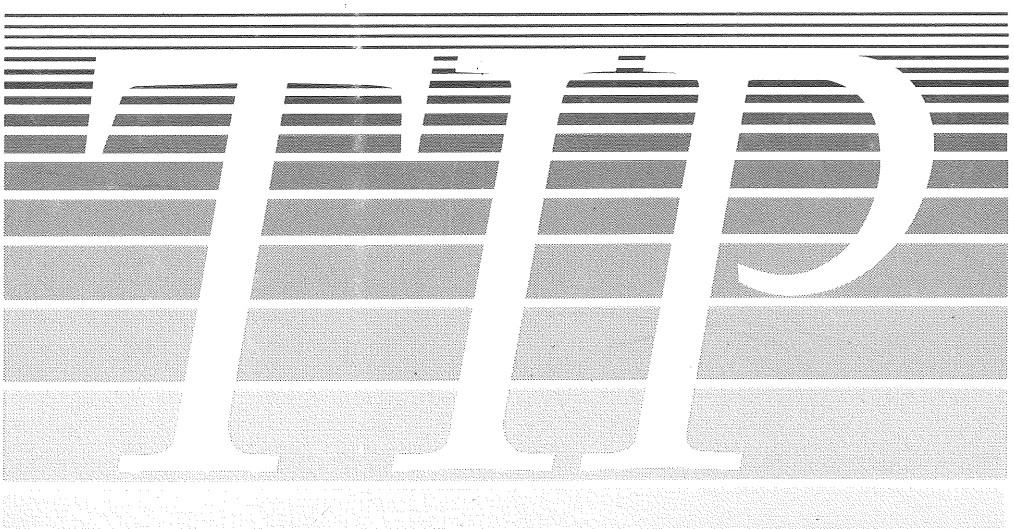

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Treatment Improvement Protocol (TIP) Series

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The opinions expressed herein are the views of the consensus panel participants and do not reflect the official position of CSAT or any other part of the U.S. Department of Health and Human Services (DHHS). No official support or endorsement of CSAT or DHHS is intended or should be inferred. The guidelines proffered in this document should not be considered as substitutes for individualized patient care and treatment decisions.

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What Is A TIP?

CSAT Treatment Improvement Protocols (TIPs) are prepared by the Quality Assurance and Evaluation Branch to facilitate the transfer of state-of-the-art protocols and guidelines for the treatment of alcohol and other drug (AOD) abuse from acknowledged clinical, research, and administrative experts to the Nation's AOD abuse treatment resources.

The dissemination of a TIP is the last step in a process that begins with the recommendation of an AOD abuse problem area for consideration by a panel of experts. These include clinicians, researchers, and program managers, as well as professionals in such related fields as social services or criminal justice.

Once a topic has been selected, CSAT creates a Federal resource panel, with members from pertinent Federal agencies and national organizations, to review the state of the art in treatment and program management in the area selected. Recommendations from this Federal panel are then transmitted to the members of a second group, which consists of non-Federal experts who are intimately familiar with the topic. This group, known as a non-Federal consensus panel, meets for about three days, makes recommendations, defines protocols, and arrives at agreement on protocols. Its members represent AOD abuse treatment programs, hospitals, community health centers, counseling programs, criminal justice and child welfare agencies, and private practitioners. A chair for the panel is charged with responsibility for ensuring that the resulting protocol reflects true group consensus. The next step is a review of the proposed guidelines and protocol by a third group whose members serve as expert field reviewers. Once their recommendations and responses have been reviewed, the chair approves the document for publication. The result is a TIP reflecting the actual state of the art of AOD abuse treatment in public and private programs recognized for their provision of high quality and innovative AOD abuse treatment.

This TIP, on the treatment of AOD-abusing adolescents, is the fourth published by CSAT since a treatment improvement initiative began. It represents another step by CSAT toward its goal of bringing national leadership to bear in the effort to improve AOD abuse treatment.

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Chapter 1—Introduction

The extent of alcohol and other drug (AOD) abuse among adolescents has been well documented, and so too the immediate and long-term physiologic, behavioral, and social consequences of use, abuse, and addiction. Yet insufficient attention has been paid to the specific needs of adolescents regarding treatment and little recognition has been given to the differences between the needs of adolescents and those of adults.

There is a paucity of research or clinical evaluation addressing what types of treatment and treatment settings are best for treating adolescent AOD dependency. Proper attention to the care of the nation's young people requires the evolution of specific guidelines for the treatment of AOD abuse encountered during adolescence. Consequently, to address these needs, the Center for Substance Abuse Treatment (CSAT) in 1992 convened a panel of experienced researchers and clinicians who work with adolescents and their families.

The panel was asked to focus on the particular treatment needs of adolescents and provide guidelines that could be used both by treatment programs to design and deliver effective services to clients aged 11 through 21, and by professionals who must choose among treatment alternatives for troubled young people. These guidelines form the basis of this Treatment Improvement Protocol (TIP).

CSAT had earlier convened another consensus panel which examined the screening and assessment of adolescents with AOD use and abuse problems. That panel addressed methods for identifying potential AOD abusers, assessing their treatment problems, and planning appropriate interventions. The TIP which evolved from the panel on screening and assessment should be viewed as a companion volume to this TIP on treatment. Its title is *Screening and Assessment of Alcohol- and Other Drug (AOD)-Abusing Adolescents.*

The panel on adolescent AOD treatment was charged with producing guidelines to be used by governmental agencies and treatment providers in the establishment, funding, operation, monitoring, and evaluation of treatment programs for AOD-abusing adolescents. In addition, an effort was made to define treatment approaches to meet the specific needs of AOD-abusing adolescents involved with the criminal and juvenile justice systems.

The fundamental assumptions underlying the TIP include the following:

- Adolescent clients require core AOD abuse treatment services that differ from those needed by adult AOD abusers.
- Among these needed services are assessment and diagnosis; appropriate type and level of treatment; counseling; a variety of other behavioral, cognitive, and family therapies; continuing care and relapse prevention; and independent living skills training.
- Ancillary services for AOD abusers should be tailored to the specific needs of adolescents.

There is no clear, universally accepted definition of "adolescence." Differing definitions are based upon chronologic age, physiologic events, and behavioral accomplishments. The consensus panel opted to neither choose among extant definitions nor create a new one, but rather to agree that, in general, the TIP guidelines would apply to persons aged 11 through 21.

Still, some understanding of what constitutes the process of adolescence serves as a background for the evolution of AOD abuse treatment guidelines for this age group. This is provided in Appendix A, in a reprint of an article, "Developmental Processes of Adolescence," by Andrea Marks and Michael I. Cohen, which will enable interested readers to better understand the developmental processes of adolescence.

Some readers may wish for an elaboration of the components of a comprehensive medical examination of an adolescent, an alcohol or drug-using adolescent, or an adolescent who enters the juvenile justice system. The consensus panel wishes to underscore the importance of a comprehensive medical examination, but it was not within the purview or mandate of the panel to elaborate examination standards, particularly as such standards are already available in other published materials.

This TIP represents a compilation of the best thinking of not only the members of the consensus panel but also a cohort of other professionals who contributed their wisdom toward editing, refining, and

improving this document. In producing this TIP, there was never an intention to codify a single way to provide services to young people. Rather, it is understood that any set of guidelines must be adjusted to meet local needs, financial realities, and the circumstances of a particular population of teenagers or an individual adolescent. Hopefully, the guidelines, information, insights, and perspectives within this TIP will be of assistance to all those charged with the responsibility of providing evaluation and care for troubled youth.

Organization of This Volume

In addition to this introductory chapter, the TIP has six major chapters. Chapter 2 is titled "A Comprehensive Continuum of Adolescent Treatment Options," and describes levels and types of AOD abuse treatment settings and intensities. Chapter 3, called "Outpatient Treatment for Adolescents," reviews the types of outpatient services, treatment components, and various program and staff issues. Chapter 4, "Inpatient Treatment for Adolescents," similarly reviews inpatient adolescent AOD abuse treatment. Chapter 5, "Adolescent AOD Abuse Treatment in the Juvenile Justice System," is an overview of the juvenile justice system, the relationship between this system and AOD abuse treatment, and recommendations for programming and treatment improvement. Chapter 6, "Legal and Ethical Issues in the Treatment of Substance-Abusing Adolescents," is a description of the legal and ethical issues that relate to diagnosis and treatment of the incarcerated adolescent, as well as the impact of the correctional system on medical treatment. Chapter 7, "Cost Models for Adolescent Treatment Programs," describes three sample treatment programs: 1) combined intensive and nonintensive outpatient, 2) intermediate residential, and 3) psychosocial therapeutic community. Also, the TIP includes an appendix on the drugs of abuse.

Chapter 2—A Comprehensive Continuum of Adolescent Treatment Options

Introduction

Traditional alcohol and other drug (AOD) abuse treatment interventions may not be adequate to meet the needs of AOD-abusing adolescents. Success in treatment programs for adults, which in the past have frequently been the model used by early adolescent programs, has been defined as the patient's maintenance of abstinence. Such a limited definition of success may be inappropriate to the broader range of problems and deficits encountered in the young AOD abuser. The multiple problems facing the AOD-abusing adolescent require that a full range of comprehensive, integrated, and systemic services be available so that a specific treatment approach can be tailored to the needs of each young person. It is not enough to focus solely on the provision of intervention services to adolescents who have developed AOD abuse problems.

In designing a comprehensive approach to treatment for adolescents, service providers can apply a public health model and approach to services. This model is based on the three stages of primary prevention, secondary prevention, and tertiary prevention. Primary prevention is used to educate people about an illness so they can take measures to protect themselves from it. Secondary prevention—commonly called early intervention—is targeted to people at risk for the illness; its aim is to provide them with new information about the illness and to motivate them to change their risk behaviors. Tertiary prevention is the treatment of the illness.

When this public health approach is applied to AOD prevention and treatment activities with adolescents, the first stage is the provision of primary prevention to those adolescents who have no AOD abuse problems. The next stage is secondary prevention, designed to influence the behavior of adolescents who are at risk for AOD problems. The third stage is tertiary prevention, or treatment, which may be provided as outpatient, inpatient, or residential treatment. The entire range of treatment services can be viewed as a continuum of progressively complex services, ranging from the less intense outpatient treatment to the most intense inpatient treatment. The goal is to assist adolescents with AOD abuse problems in achieving the state of independent living without the use of AODs.

The achievement of independent living skills is especially important for AOD-using adolescents, since many of them must be "habilitated" rather than rehabilitated in order to bring about successful outcomes. In contrast with many adults with AOD abuse problems, adolescents commonly do not have an earlier level of successful independent functioning to which to return through rehabilitation. This is largely because of the early onset of AOD use before the adolescent has had a chance to mature, while he or she still faces developmental, personal, familial, and environmental tasks.

Severity of AOD Problems And Treatment Options

Outpatient, inpatient, and residential treatment options consist of various levels and types of care which can be subdivided into specific and detailed services for adolescents at risk of or already experiencing AOD abuse problems. These treatment options can be viewed together as a continuum of treatment options ranging from services for adolescents who need the least intensive to the most intensive treatment. Options include outpatient, inpatient, and residential treatment as well as services that support independent living. Pretreatment service options are intentionally included in this system because they represent the service needs of many at-risk adolescents and those in the early stages of AOD use.

The differences between levels are both qualitative and quantitative, with differences in intensity of service being only one aspect of the continuum. Treatment programs of the same level of intensity may differ considerably from one another based on their individual philosophies of AOD problems and treatment, the treatment components they offer, and the types of staff employed. It is important that the array of available treatment services matches the needs of the individual adolescents they are intended to serve. When this is the case, the continuum can be used to decide

what type of treatment placement is needed by individual adolescents.

Three principles guided the consensus panel in the construction of this continuum (see Exhibit 1):

- Levels of treatment and service options must respond to the internal and environmental realities of at-risk or AOD-abusing adolescents.
- Individuals with very different levels of clinical sophistication can be expected to use this placement system. The system is user-friendly, while offering the necessary components for making appropriate placement decisions. Finding the blocks that accurately describe an adolescent's status (or assessment criteria) in five areas will indicate the level of treatment needed. These areas are: toxicity/withdrawal, medical, intrapersonal, interpersonal, and environmental.
- The continuum is designed to be internally consistent and reliable in making placement decisions.

Assessment criteria are utilized in making appropriate placement decisions. These criteria assist the assessor in determining the appropriate levels and types of services. These criteria include physiologic, cognitive, emotional, social, and environmental issues.

- Physiologic: Toxicity, withdrawal, and other medical sequelae from AOD use, as well as medical problems unrelated to AOD use.
- Cognitive: AOD-induced impairment in cognition and thinking, both chronic and acute, including neurological deficits as well as memory problems such as blackouts, short-term memory deficits, and poor concentration.
- Emotional: Assessment of emotional functioning, from inability to experience emotions to extreme negative emotional states.
- Social: Assessment of interpersonal relationships, social development, and assessment of social issues such as employment, family, friends, and legal issues.
- Environmental: Assessment of environmental influences, including living conditions, housing, gang influence, and family and school influences.

These criteria form a framework for determining which specific types of services meet the needs of particular at-risk or AOD-abusing adolescents. The continuum is only a guideline. Appropriate placement decisions must still rely on the professional skills of the assessor. For example, toxicity standards specific to adolescents still need to be developed, and such assessment criteria need to be objective and measurable (for example, with the use of detoxification scales).

The continuum of treatment model underscores the importance of understanding the factors that have an impact on the adolescent and are appropriate for comprehensively assessing the adolescent. It also emphasizes the fact that comprehensive assessment must include collecting information from family members and other collateral sources of information whenever possible in order to obtain a picture of the adolescent's social and environmental situation.

Recommendations for Using the Continuum

To use the continuum, identify the description under each criterion that best describes the adolescent's status. For example, assessment of an adolescent's drug-related toxicity might indicate that he has medical conditions which cannot be handled with outpatient medical management, but which are not severe enough to require life support and intensive medication. This would suggest that the adolescent requires care as a medically monitored inpatient. On the other hand, his emotional and intrapersonal skills might be significantly impaired, requiring 24-hour continuous psychiatric monitoring. The following guidelines indicate how the continuum can be used in making a decision regarding the placement of the adolescent.

1. When an assessment indicates the need for a particular level of care that is not available, the adolescent should automatically be referred to the next higher level of care, unless the assessment indicates that such a placement would be counterproductive. For example, if intensive outpatient treatment is indicated but unavailable, day treatment should be the next recommendation, unless it is contraindicated.
2. In making placement decisions, practitioners should choose the highest level of care indicated by any single assessment criterion (for example, no history of current use in an actively psychotic adolescent would require inpatient treatment).
3. Assessment is a continual and ongoing process. Decisions should be made about the level of care based on the adolescent's progress and changes in his or her environment. Patients should have the opportunity to move back and forth across the level-of-care continuum based on changes in these factors.
4. There is as much, if not more, variability among treatment programs within a single intensity level as there is across treatment intensity levels. The assessor should incorporate this understanding when making placement decisions. Assessors should have an in-depth knowledge of the services and the intensity of any particular treatment/service option. They should not rely solely on a program's name or stated type of service (such as "Residential Care, Inc.").
5. The assessment criteria are interrelated and can be viewed as an integrated system. This

Exhibit 1
Client Assessment Criteria

TOXICITY/ WITHDRAWAL	MEDICAL	INTRAPERSONAL	INTERPERSONAL	ENVIRONMENTAL	TYPE OF TREATMENT
No history of use; no current use.	Only those medical conditions that can be handled without patient medical management.	Developmentally appropriate; effective coping skills; moderate to high emotional/cognitive functioning.	Demonstrates developmentally appropriate, prosocial interpersonal behavior; maintains responsible relationships with significant others.	May have no significant impact.	**Primary prevention**
Positive history of use; no current use.	Positive history of use; no current use.	Less effective coping skills; but competent emotional/cognitive functioning.	Demonstrates developmentally appropriate prosocial interpersonal behavior; maintains responsible relationships with significant others; and history of AOD and/or other risk-related behaviors that increase the potential for developing psychoactive substance use disorder (PSUD); able to function in a nonstructured setting.	One or more environmental/contextual factors that increase personal vulnerability (family history of AOD problems) indicate need for intervention.	**Early intervention**
Problem(s) resulting from use; no current use, or low to moderate use without anticipated withdrawal.	Problem(s) resulting from use; no current use, or low to moderate use without anticipated withdrawal.	Less effective coping skills; less competent emotional/cognitive functioning; still able to function in a nonstructured setting.	Identified deficiencies in relationships with significant others and history of AOD and/or other risk-related behaviors that increase the potential for developing PSUD; able to function in a nonstructured setting.	Environmental/contextual factors affect the individual, but do not warrant removal from current living situation; needs to be supported by minimal treatment.	**Outpatient treatment**

CLIENT ASSESSMENT CRITERIA					
TOXICITY/ WITHDRAWAL	**MEDICAL**	**INTRAPERSONAL**	**INTERPERSONAL**	**ENVIRONMENTAL**	**TYPE OF TREATMENT**
Premorbid/subacute toxicity; compliant with detoxification regimen; social support for detoxification.	Premorbid/subacute toxicity; compliant with detoxification regimen; social support for detoxification.	Ineffective but functional coping skills; less competent emotional/cognitive functioning; requires marginally structured setting.	Identified deficiencies in relationships with significant others and history of AOD and/or other risk-related behaviors that increase the potential for developing PSUD; requires marginally structured setting.	Environmental/contextual factors have an impact on the individual, but do not warrant removal from current living situation; needs to be supported by moderate treatment.	**Intensive Outpatient Treatment**
Premorbid/subacute toxicity; compliant with detoxification regimen.	Premorbid/subacute toxicity; compliant with detoxification regimen.	Ineffective but functional coping skills; less competent emotional/cognitive functioning; requires moderately structured setting.	Identified deficiencies in relationships with significant others and history of AOD or other behaviors that place individuals at risk for developing PSUD; requires moderately structured setting.	Environmental/Contextual factors impact the individual, but do not warrant removal from current living situation; needs to be supported by intensive treatment.	**Day treatment partial hospitalization**

CLIENT ASSESSMENT CRITERIA					
TOXICITY/ WITHDRAWAL	**MEDICAL**	**INTRAPERSONAL**	**INTERPERSONAL**	**ENVIRONMENTAL**	**TYPE OF TREATMENT**
Premorbid, subacute toxicity requiring 24 hour medical monitoring.	Medical conditions which cannot be handled with outpatient medical management, but do not require life support/intensive treatment services.	Dysfunctional coping skills; emotional/cognitive/psychiatric impairment requiring 24 hour structured setting.	Dysfunctional relationships and behaviors which do not pose an immediate threat to self and/or others but require 24 hour structured care.	Environmental/contextual factors dictate individual must be removed from adverse influences of the current living situation.	**Medically monitored intensive inpatient**
Morbid, acute toxicity (overdose) that may require life support.	All medically complicating conditions, including those requiring life support/intensive care.	Dysfunctional coping skills; emotional/cognitive/psychiatric impairment requiring 24 hour structured care and continuous psychiatric monitoring.	Dysfunctional relationships and behaviors which may pose an immediate threat to self and/or others and require 24 hour structured care and psychiatric management.	Environmental/contextual factors dictate individual must be removed from adverse influences of the current living situation.	**Medically managed intensive inpatient**
Detoxification services not required.	Medical conditions which can be handled with outpatient medical management and/or which do not require life support/intensive treatment services.	Dysfunctional coping skills; emotional/cognitive/psychiatric impairment; requiring long-term residential treatment includ-ing psychiatric and activi-ties of daily living (ADL) services.	Dysfunctional relationships and behaviors which do not pose an immediate threat to self and/or others, but require 24 hour structured care which includes ADL services but may not require psychiatric services; behavior manageable within a structured setting.	Environmental/contextual factors dictate individual must be removed from adverse influences of the current living situation.	**Intensive residential treatment**

CLIENT ASSESSMENT CRITERIA					
TOXICITY/ WITHDRAWAL	**MEDICAL**	**INTRAPERSONAL**	**INTERPERSONAL**	**ENVIRONMENTAL**	**TYPE OF TREATMENT**
Detoxification services not required.	No special medical services required on site.	Dysfunctional coping skills; emotional/cognitive/psychiatric impairment; requires supervision in structured setting, ADL and other psychosocial rehabilitation.	Dysfunctional relationships and behaviors which do not pose an immediate threat to self and/or others, but which require behavior management within a structured setting which provides supervision, ADL, and other psychosocial rehabilitation.	Environmental/contextual factors dictate individual must be removed from adverse influences of current living situation.	**Residential psychosocial care**
Detoxification services not required.	No special medical services required on site.	Adequate coping skills; has moderate to high level of emotional/cognitive functioning but requires some supervision.	Ability to establish prosocial relationships that support recovery; able to self-regulate behavior with minimal structure/ supervision.	Environmental/contextual factors dictate individual must be removed from current living situation or other adverse circumstances.	**Halfway house**
Detoxification services not required.	No special medical services required on site.	Adequate coping skills; has moderate to high level of emotional/cognitive functioning; able to live independently.	Ability to establish prosocial relationships that support recovery; self-regulates behavior consistent with standards of responsible group living without supervision.	Environmental/contextual factors dictate individual must be removed from current living situation or other adverse circumstances.	**Group home/ group living**

point is important in considering the most appropriate treatment level and the ability of the adolescent to move along the level of care continuum as treatment progresses or regresses.

6. Adolescents may move into or through different treatment programs based on progress and/or changes in the environment. Prior to each program change, in-depth reassessment must be completed in order to update information on the individual's status and to obtain a current clinical picture of the client's situation.

Next Steps in the Field

1. The consensus panel recommends that this continuum of treatment options, augmented by standardized definitions and other protocols, be the basis for the design of a training program for practitioners in the field. Such training is critical because of variation in levels of sophistication of the personnel who will be using these CSAT protocols. At all levels, people working with AOD-using adolescents will need to use the protocols appropriately. Training will enable them to do so and help to ensure enhanced levels of clinical capability.
2. In the context of such training, the panel also recommends the development of a standardized glossary of terms, thereby ensuring consistency of definitions as well as the development of a set of measurable, objective criteria for selecting treatment and service options.
3. The panel recommends that CSAT apply its funding leverage to whatever extent possible to broaden existing treatment and service options so that a comprehensive continuum of care can be established and maintained. It is hoped that in its allocation of resources, CSAT will foster innovative services designed to meet the wide spectrum of needs of this target population.

Levels and Types of Care

There are three major categories of responses to AOD use: pretreatment services, outpatient treatment, and inpatient treatment (including residential care). Each category has several subsets.

Pretreatment Services

These services, which do not provide primary treatment, refer to primary prevention or early intervention. While this TIP does not address this literature, interested readers are directed to the Bibliography at the end of chapter 3.

Primary Prevention. This refers to services for adolescents who have not yet used AODs. Most primary prevention programs are school- or community-based.

Early Intervention. This is a psychoeducational approach for adolescents who have used AODs and are considered to be at high risk for AOD-related problems. This level may also be used for adolescents who have a history of AOD use. It is also appropriate for AOD-using adolescents who do not meet the diagnosis of an AOD use disorder. This level may be used for ongoing evaluation for possible referral to a more intensive level of care. In some instances, this level can be used as short-term treatment for selected adolescents whose AOD problem is of low severity.

Outpatient Treatment

Also referred to as ambulatory care, these services provide a broad range of intensity levels without overnight accommodation. Some of these levels may be used subsequent to inpatient treatment.

Nonintensive Outpatient Treatment. This AOD-focused treatment includes professionally directed evaluation and treatment typically of less than 9 hours per week in regularly scheduled sessions. Nonintensive outpatient treatment may also address related psychiatric, emotional, and social issues.[1]

Intensive Outpatient Treatment. This is AOD-focused, professionally directed evaluation and treatment of 9-20 hours per week in a structured program. These programs may be after-school or evening programs, and frequently include some weekend programming.

Day Treatment or Partial Hospitalization. This is AOD-focused, professionally directed evaluation and treatment of more than 20 hours per week in a structured program. This is the most intensive of the outpatient treatment options and can be used for treating those adolescents who demonstrate the greatest degree of dysfunction but do not require inpatient treatment.

Inpatient Treatment Options/Residential Care

These levels can include intensive medical, psychiatric, and psychosocial treatment provided on a 24-hour basis and residential care. The levels of the residential care continuum include psychosocial care at the most intensive end and group home living without any professional involvement or supervision at the least intensive end.

Medically Monitored Intensive Inpatient Treatment.[2] This level of care involves around-the-clock medical and nursing monitoring, evaluation, and treatment in an inpatient setting. This level of care is used for adolescents who have acute and severe AOD use disorders and who may also have a coexisting medical or psychiatric problem. This generally involves a short-to-intermediate length of stay (7-45 days).

Medically Managed Intensive Inpatient Treatment. This level of care involves around-the-clock medically directed evaluation and treatment in an acute care inpatient setting. This level of care is appropriate for the treatment of medical and psychiatric problems that may require biomedical treatment (such as life support) or secure services (such as locked units). This generally involves a short-to-intermediate length of stay (7-45 days).

Intensive Residential Treatment. This is an adolescent-specific, AOD-focused, long-term (6-24 months) treatment model that may be professionally or medically directed. This model, which shares similarities with an adult therapeutic community model, is appropriate for adolescents with multiple problems, especially adolescents with dual disorders involving a personality and AOD use disorder. The goal of psychosocial rehabilitation is always part of treatment.

Psychosocial Residential Care. This is an adolescent-specific, AOD-focused, long-term (6-24 months), professionally directed, psychosocial care model. This model shares similarities with an adult therapeutic community model and relies heavily on peer pressure as well as formal treatment to shape behavior. It is appropriate for adolescents with AOD abuse problems along with concomitant DSM-III-R, Axis II disorders that are not of a severity level requiring acute medical or psychiatric intervention. Adolescents who are compliant with psychiatric and other prescription medications may be appropriate for this level of care. The focus of care is on psychosocial rehabilitation.

Halfway House. This is a residential, transitional living situation with minimal treatment in which residents are supervised by paid staff. Residents may work and receive educational or training services or treatment outside of the house, although some treatment may be provided in the house. The house responsibilities are shared and rules must be followed. The length of stay may be limited or unlimited, contingent on the attainment of specific progress goals.

Group Home Living. This refers to a residential, transitional living situation without any specific treatment plan and minimal staff supervision. Residents may work and/or receive educational or training services or treatment outside of the house. Admission of new residents is generally decided upon by residents already living in the house. House responsibilities are shared and the house is run on the basis of self-governance. Because of the absence of staff supervision, this service is only appropriate for older, emancipated adolescents. The length of stay is generally unlimited as long as abstinence from AOD is maintained by the residents.

Therapeutic foster home placements, where a small number of AOD-involved adolescents are placed in a family situation, often with foster parents who are themselves recovering, have similarities with group home initiatives.

Endnotes

[1] The number of treatment hours is taken from the *Patient Placement Criteria for the Treatment of Psychoactive Substance Use Disorders of the American Society of Addiction Medicine (ASAM)* and is offered as a working prototype. Some States have developed licensing regulations that dictate the number of hours associated with different levels of outpatient care. The hours, therefore, are only guidelines and may need to be altered to be consistent with State licensing regulations.

[2] Adapted from ASAM Criteria.

Chapter 3—Outpatient Treatment For Adolescents

Outpatient programs for alcohol and other drug (AOD)-abusing adolescents are fairly new to the treatment field. Outpatient treatment has the following advantages: it is less restrictive and typically less expensive than residential treatment; adolescents can receive treatment in their own community; and the disruption to the family can be minimized. Perhaps outpatient services have been underutilized because of the difficulty in identifying and diagnosing adolescent AOD abuse in a timely fashion. Sometimes adolescents' AOD problems have progressed too far to allow them to comply with the requirements of an outpatient setting. Emphasis must be placed on matching the clinical needs of the client to the least restrictive, yet appropriate, level of treatment.[1] Clearly, more research is needed to determine the relative effectiveness of varying levels of treatment for adolescents.

Throughout this chapter, a *family-centered* approach to treatment is advocated. Adolescent AOD problems are often symptomatic of larger problems within the family. The definition of family is expanded to include significant others and involved helpers. This definition of family is especially important when considering minority adolescents. Family members may include tribal members or significant community leaders. Active collaboration between therapists and involved helpers can be a vital component in treatment outcome. Although family-focused treatment is encouraged, family involvement is not always feasible and is sometimes contraindicated, especially in some chaotic family situations. Moreover, funding sources typically do not provide for sufficient services to involve the family effectively in all aspects of treatment. Nonetheless, family-centered treatment, when possible, is an important element in the recovery process.

Three other concepts that are essential to AOD outpatient adolescent treatment are strongly advocated throughout this chapter. First, cultural sensitivity and competence are critical. Clients come from varied cultural and racial backgrounds. It is urgent that cultural and racial issues be competently addressed throughout all aspects of the treatment program. Second, it is crucial for programs to collaborate with the juvenile justice and child welfare systems. Many adolescents seeking treatment are referred from these systems. Some youths may be wards of the State (for example, adolescents who are adjudicated or in foster care). Often, these systems are stretched beyond their administrative and service-providing limits, which can frustrate the efforts of a treatment program to initiate and maintain a collaborative relationship with these agencies. For collaboration to be effective, the treatment program will often need to educate other organizations about the philosophy of treatment and the rationale for specific treatment approaches. Third, knowledge of adolescents' cognitive-developmental level and the psychosocial factors that may have contributed to their AOD problems must be an integral aspect of treatment.

It is hoped that this document not only will assist professionals in managing adolescents with AOD abuse problems, but also will provide encouragement to the field to develop individualized treatment strategies for adolescents, an initiative often absent from current outpatient programs. The inability of programs to financially sustain needed services, however, is frequently a significant obstacle. In addition, there are often large disparities in accessible treatment based upon the client's ability to pay. An even larger gap exists between general public sector programs and those programs found in inner cities. Both cost and treatment factors create challenges for many outpatient AOD treatment programs serving adolescents at this time.

Definition

Outpatient AOD treatment can be defined as a system of providing help to AOD abusers in a setting outside of an inpatient or residential program. Clients may remain at home or reside in a group home, a foster home, or a related setting. Outpatient services may take place before, in place of, or following inpatient treatment. Types and intensities of outpatient treatment services vary greatly from program to program. Programs may offer group, family, and individual counseling, intensive evening or after-school programs, and partial

day treatment. The frequency of required attendance may also vary from program to program, anywhere from 1 to several days a week. This chapter will discuss the components of outpatient programs that contribute to effective treatment for AOD abuse.

Types of Outpatient Services

Outpatient treatment services can be distinguished with regard to intensity: 1) nonintensive, 2) intensive, and 3) day treatment (or "partial hospitalization"). *Nonintensive* outpatient treatment refers to regularly scheduled sessions that usually total less than 9 hours per week; *intensive* treatment refers to treatment of 9 to 20 hours per week in a structured program; and *day treatment*—the most intensive outpatient program—typically refers to more than 20 hours of treatment per week.

This chapter discusses and describes treatment components, program issues, and staff issues, all of which are relevant to varying levels of outpatient services. Among programs, there is great variability in client populations. Thus, programs vary in features and characteristics. Similarly, day treatment programs must be programmatically structured and staffed differently than less intensive programs. Nevertheless, some components and features are vital to all types of outpatient services.

Treatment Components

Programs will vary depending on the individual needs of the client population and the availability of resources. Despite variations among programs, certain services are basic components for treating AOD-abusing adolescents in an outpatient setting. The limits on services (such as length of stay and frequency of client contacts) provided by programs will depend on available resources and funding capabilities. Programs that cannot provide all necessary components for treatment within their facilities should establish ongoing linkages with other resources in the community.

This chapter lists and discusses 20 components of treatment, many of which are core treatment components of an effective and comprehensive program. These components have been prioritized, describing first those components that are essential to the largest number of programs, and then those treatment components that may be less essential. The extent to which a treatment component is essential will vary depending on the program. The 20 components discussed below are:

- Intake
- Screening
- Assessment
- Group therapy
- Family therapy
- Individual therapy
- Case management
- Drug testing
- Didactic groups
- Emergency services
- Recreational activities and peer socialization
- Other specialized groups
- Discharge, continuing care, and relapse prevention
- Multifamily groups
- Psychiatric interventions and services for dually diagnosed individuals
- Self-help
- Detoxification services
- Intervention
- Home-based services
- Educational services (applicable to partial hospitalization and other programs which preclude attendance in school).

Intake

The treatment process begins when the individual seeking treatment, a family member of the individual, or an agency first contacts the program, usually by telephone. Telephone receptionists, intake counselors, and other staff require training to ensure that treatment begins with initial contact. This first step in the treatment process should be to put the caller at ease and to provide a brief overview of the program's parameters, such as: length of treatment, treatment expectations, cost, and program philosophy. It is important that only a brief overview of the program be explained over the telephone; an in-depth discussion should be conducted when the adolescent, parents, and significant others make their initial visit to the program. Individuals seeking treatment should understand whether the program will meet their needs. Program staff should be able to assess whether a referral to another program would be more appropriate. If it appears that the adolescent's problems may be appropriate for treatment within the program, a screening meeting should be scheduled at his or her convenience.

Screening

The screening process begins at intake and extends through the conclusion of the assessment process. Screening often entails a brief interview and the administration of a short questionnaire within 48 hours of the initial call to begin to identify the appropriate treatment level and whether the adolescent's problem profile generally matches the program's treatment services. The process involves a meeting with the youth and, when possible, the family or involved helpers. It is at this point that the client and the program answer the following questions: "What services are needed?" and "Is this program the best match for the client?" If the available treatment services are inappropriate, the client is to be referred elsewhere.

It is often best if the screening process and initial decisions regarding the most appropriate treatment setting are made by an individual or agency that has no financial stake in a particular

placement, thereby avoiding the appearance or reality of a conflict of interest.

Assessment

The assessment process involves a more indepth evaluation of the client, lasting one or more sessions, including confirmation of the client's treatment referral and an individual and family psychosocial assessment. This step in the treatment process will give the clinical staff an understanding of the needs of the client, the motivation for treatment, and what substance use and other mental disorders may be present, and provide a basis for an initial treatment plan. The assessment should be based on multiple sources (such as client, parents, significant others, counselors, probation officers, peers, and school staff), with the aid of multiple methods (such as self-administered questionnaires, interviews, and urinalysis). A comprehensive evaluation should address the following content areas: AOD use history, signs and symptoms of AOD use, intra- and interpersonal factors, environmental factors, mental health, educational status, legal status, and medical health.

The program's confidentiality regulations should be explained to the adolescent. He or she will then be asked to sign forms for release of information and consent to receive treatment. The program's fee and grievance policies should also be explained, as well as how abstinence is monitored (for example, by urinalysis). Finally, the program's guidelines for both the client and the family should be explained, as described below.

Client Guidelines. Each client should receive a written set of program rules that represent the expectations of the treatment program. These rules may be presented in the form of a written contract that is signed by the client. Expectations should include: 1) abstinence during treatment, 2) rules for client behavior (such as respecting others and not being violent), and 3) the consequences of breaking rules. This process helps adolescents to reestablish boundaries and to understand that they are accountable for their behavior. Program staff are expected to abide by the same rules and code of behavior.

Early in treatment, adolescents should be encouraged to outline their expectations of the program, defining what they expect to get from treatment. These goals can be incorporated into the treatment plan.

Other kinds of client expectations may be encouraged. For example, a program may wish to support tobacco use cessation among youth, but may not mandate an absolute no-smoking policy in the youth's first days of treatment.

Family Guidelines. Family members should be actively involved in all aspects of treatment whenever possible, and need to be aware of expectations with regard to behavior, attitudes, and parenting practices. Program staff should work collaboratively with the family and involved helpers. Family guidelines are one way to reinforce a family-centered treatment approach.

Group Therapy

Group therapy involves peers in a group process that encourages them to address personal issues and the consequences of their AOD involvement. Some groups are led by counselors, while self-help groups are not. A major theme of group therapy is to solicit the involvement and support of others by encouraging healthy interaction. Through sharing, discussion, and problem solving, clients can begin to take responsibility for their AOD problems and begin to recognize denial and other signs of minimization.

Family Therapy

Families benefit from individual sessions, with and without the client present. Adolescent substance abuse may be a reflection of family dysfunction and family tolerance of AOD use. For the adolescent still living with or dependent upon the family, recovery is difficult without the active involvement and support of the family. Family sessions address how the family must change its patterns of behavior and communication, values, and problem-solving characteristics.

Individual Therapy

Clients may need to receive individual therapy in addition to group and family therapy. Some clients are too withdrawn and socially uncomfortable to benefit from the group process and require individual therapy. Individual therapy is effective for helping adolescents to: 1) cope with obstacles to utilizing group and family therapy and self-help groups; 2) discuss specific issues that they may not be ready to discuss in a group context; 3) improve the treatment alliance; and 4) help correct interpersonal difficulties and weaknesses.

Case Management

Case management provides linkages with other service providers or between systems (such as juvenile justice and the treatment program) in an effort to assist the client with his or her special needs. This component involves collaboration and networking with other agencies in the community to fill the gaps in services not offered by the treatment program. The range of supplementary services may include medical care, dental care, housing, mental health, Federal and State assistance applications, and housing, legal, educational, and vocational services. Helping the youth and family negotiate the various service systems and coordinate the referral process are vital aspects of case management.

Many clients and families have several psychiatric, psychological, social, economic, and medical problems that will complicate recovery. In addition, clients may be involved with multiple agencies,

such as juvenile justice, protective services, foster care, and special education. Coordination, treatment planning, and decisions about how to divide tasks among these agencies require the attention and skill of case managers. This can help families and clients to become more functional and more organized.

When adolescents are involved with the child welfare system or the juvenile justice system, it is essential that the program involve these systems in the treatment or at least inform them of it. For instance, the probation officer should be involved in treatment when adolescents are detained by the juvenile court; the social worker or foster parent should be involved when adolescents are in foster care. (See Program Issues: Collaboration and Communication with Referring Agencies.) The coordination of case management among various systems may take the form of interagency agreements, including ongoing group case management meetings with agency representatives. Treatment programs should not assume that these systems will initiate such collaboration; often, the treatment program must take the initiative. The development of a coordinated case management protocol can enhance treatment effectiveness by decreasing the possibility that:

- Clients will manipulate the various systems,
- Clients will perceive that the system "doesn't care" (since key concerns may have been insufficiently addressed), and
- The various systems will implement strategies that result in conflicting, duplicate, or contraindicated services.

Case management meetings can be particularly important in instances where the client has other diagnoses in addition to AOD abuse. For example, if a client is HIV positive and has AOD problems, meetings with the agencies that provide medical care and support services to the client may be a necessity. Similarly, if there is a dual diagnosis—AOD abuse and a mental disorder—coordination between the treatment program and a mental health program is usually required. Few treatment programs can offer the needed mental health services themselves.

In all contacts with other agencies and individuals, there must always be respect for the client's right to confidentiality. This is particularly pertinent to issues of substance abuse, sexuality, and health problems such as HIV.

Drug Testing

Adolescents in treatment may minimize, deny, or otherwise distort the actual extent of their AOD use. To determine recent use, to be able to confront use during treatment, and to provide information about relapses, frequent urine drug screens (UDS) may be helpful. Testing all youth at intake, random screening during treatment and continuing care, and designated screening when the therapist believes a youth is deceptive about use are suggested. It is important to keep in mind that UA screens measure only recent use, and do not provide information about the onset of substance abuse, the rate of use, or the quantity of use. (See *Treatment Alternatives to Street Crime (TASC)–Implementing the Model–Implementation Manual,* chapter on "Policies, Procedures and Technology for Monitoring . . . Clients' Drug Use/Abuse Status through Urinalysis or Other Physical Evidence.")

Didactic Groups

Didactic groups provide an opportunity for the adolescent to learn about the effects of AOD abuse in a nonthreatening setting. Conducted like a classroom experience, these groups often help young people gain insight about their AOD problems and increase their motivation for self-care. Also, didactic groups are effective in decreasing denial and negative feelings about the treatment process.

Didactic groups address several topics. Programs may not address the entire range of suggested topics that are listed below. Selected topics will depend on the needs of the client population and the resource capabilities of the program. Referrals may be possible to other community programs for certain groups. Topics that are discussed in educational groups can include the following:

- Medical effects and consequences of drug use and abuse.
- The disease model of addiction (including the signs and symptoms).
- Introduction to 12-step programs (for example, stepwork, traditions, spirituality).
- Denial and other defense strategies.
- Effects of chemical dependency on the family, codependency, and issues of the children of alcoholics.
- Thinking errors or illogical thinking patterns.
- Human sexuality. (When possible, there should be separate male and female groups. Also, issues pertaining to gay and lesbian youth may need attention.)
- HIV/AIDS education. The risk of HIV transmission to drug-abusing teens is increasing. During this period of biologically heightened sexual awareness, initiation into a variety of sexual practices may include heterosexual, bisexual, or homosexual experimentation. AOD use reduces inhibitions, which may encourage risky sexual behavior and other HIV/AIDS risk-taking behaviors such as needle-sharing. Program staff should provide accurate explanations on how to prevent HIV infection and should develop networks with other community agencies that specialize in HIV services for adolescents.
- Coping skills.

Emergency Services

Programs must make provisions for the availability of emergency services. These provisions should

include the on-call availability of professionals, crisis intervention, crisis management, and referrals to crisis and emergency shelter programs. Emergency service is an essential treatment component when working with AOD-abusing adolescents, some of whom may be suicidal or violent. Moreover, it is not unusual for adolescents and families during the early phases of assessment and treatment to experience great stress. Crisis intervention can address these stresses and help the client and family to make decisions that are likely to reduce the strain and to begin the course of treatment.

Recreational Activities and Peer Socialization

It is important for adolescents to explore alternative ways to have fun without the use of AODs. Mastering social situations and physical and mental challenges enhances adolescents' self-esteem and improves their repertoire of social and practical coping skills. Outings can involve sports and games, museum visits, boat rides, dances, and wilderness experiences. Staff can participate in the activities, serving as positive role models for the clients. Most programs employ recreational therapists to coordinate these activities.

Other Specialized Groups

Many adolescents in treatment have special life problems and personal needs. It is important for programs to be flexible, and to provide group treatment opportunities for these youth. Again, the need for particular specialized groups will vary greatly and will depend on the nature of the client population. If a client has a particular need and a group is not available, it may be possible to address the issue in individual treatment or referral services. Relevant topics for specialized groups are discussed below.

Cultural Group. Programs may be located in areas where there are large communities of ethnic and cultural populations. Thus, cultural groups may need to address general as well as specific ethnic, racial, and cultural concerns. Specific issues might include:

- Racism
- Anger and frustration
- Cultural drug use patterns
- Discrimination
- Family patterns
- Rituals and ceremonies
- Negotiating service systems that may be insensitive to ethnic groups
- Positive aspects of "being different."

Skill Building, Problem Solving, and Conflict Resolution. Skill building and peer socialization take place in all youth groups as adolescents learn to talk about themselves and to listen to others. Prolonged AOD use often results in social skill deficits. Without rehabilitating these deficits, youth will feel uncomfortable and out of place with peers who do not use AODs. Their primary area of personal expertise will center around drug knowledge and experience, making it difficult to maintain a clean and sober lifestyle.

Programs should encourage the development of new skills or the enhancement of existing skills by presenting information, offering practice opportunities in group therapy, and incorporating naturally occurring "real event" opportunities. These components of social skills should be targeted: self-disclosure, giving and receiving positive and negative feedback, problem solving, conflict resolution and mediation, negotiation, assertiveness, coping with peer pressure, and communication skills. Furthermore, it is appropriate to build skills relevant to understanding the cycle of violence, socializing and taking part in recreational activities without the use of chemicals, and setting realistic personal goals. Also, it is essential to offer conflict resolution groups within programs located in areas where there is a high rate of violence.

Human Immunodeficiency Virus (HIV). As the HIV epidemic spreads among the adolescent population, increasing numbers of teens will test positive for the HIV virus. Unfortunately, support groups for teens who are HIV-positive are much less common than such groups for adults. Improving this state of affairs should be a high priority for the adolescent treatment field. Also, teens will increasingly be dealing with concerns regarding significant others, including caretakers and sexual partners, who have AIDS or are HIV-infected.

Pregnancy and Parenting. Teens with AOD problems who are pregnant or are parents have special needs and require special support. Adolescent mothers and fathers often need to learn parenting skills, and pregnant girls have many prenatal needs including the maintenance of good nutrition. Either daycare services need to be available while the teen parents are undergoing treatment, or provisions should be in place to allow the mothers and children to remain together while the youths are in treatment. In some cases, therapeutic daycare or other special services[2] are needed for the mothers' young children.

Tobacco Cessation. Tobacco is an addictive substance that continues to be a significant public health problem. Specific behavioral and educational programs aimed at smoking cessation now exist, some of which include the use of nicotine patches and nicotine gum. A no-smoking policy for clients and staff should be encouraged. Of course, tobacco use by minors is illegal.

Independent Living Skills. Adolescents who are not living with their families or who will soon become independent require basic survival skills. Such skills include: money management, shopping, daily planning, job skills, finding an apartment, adjusting to roommates, and using social support systems.

Diagnosis-Specific Group. Because of the high prevalence of psychiatric disorders among AOD-

abusing youth, there is uniform agreement that these problems must be addressed as part of the treatment and relapse prevention conducted by specialized professionals. Ideally, adolescent clients sharing the same diagnosis would be able to participate in group sessions. Funding, program priorities, and time limitations may prevent an outpatient program from providing this service, however. When diagnosis-specific groups cannot be provided inhouse, it is incumbent on the program to utilize appropriate services in the community to bridge the gap.

Health, Nutrition, Healthy Sexuality, Sexually Transmitted Diseases (STDs), and Contraceptives. To support the development of health promotion practices, programs should offer courses on special topics such as nutrition, STDs, contraceptives, and tuberculosis.

Alumni Groups. Alumni groups are organized to encourage attachment among recovering clients and families, to exert positive peer pressure, to foster support and encouragement to stay in treatment for those who are struggling in early recovery, and to increase social opportunities and decrease isolation. These groups are especially helpful to outpatient programs, which, due to limitations on time and staffing, do not always have the same opportunity as residential programs to consistently maintain contacts with recovering clients.

Gangs. Programs located in areas where gangs are prevalent may wish to offer discussions regarding the issues of gang membership.

Drug Dealers or Couriers. In some areas of the country, youth have been introduced to AOD use by serving as couriers for drug dealers. Youth may be coerced into such activity by family members or by peer pressure. While drug dealing can become a very enticing way of life because the financial rewards can be great, many youthful drug dealers become involved with the juvenile justice system.

Topics to be addressed in groups on drug dealing include: transferring short-term gratification to long-term goals (including vocational and educational objectives); recognizing that selling drugs involves entrepreneurial skills that can be redirected toward legal ventures; reinforcing alternatives to the hopelessness and despair that exist in some communities where the youth's most visible role models are drug dealers; confronting the perception that society condones illegal drug activities and that dealers always "get away with it;" and learning techniques and skills to counteract pressure to continue dealing drugs.

Prostitution. In some communities, it may not be unusual to find youth who engage in prostitution or "survival sex" to support their drug use. They may benefit from participation in a specialized support group. Prostitution, which may occur with adolescent males as well as females, is often intertwined with AOD use and is seen frequently among street youth who may be runaways or homeless. Furthermore, female teenagers may accept money or gifts from older males in exchange for sex, companionship, or drugs, not identifying their behavior as a form of prostitution.

Drug-Specific Groups. Patterns of adolescent drug abuse vary from community to community, year to year, and client to client. Certain substances, by their very nature, may require a specific focus. For instance, many communities are experiencing a growing problem of inhalant abuse (airplane glue, gasoline, spray paints, typewriter correction fluid, and cleaning fluids). Programs may wish to offer a specialized group for youth who use specific drugs or who have specific drug use patterns.

Additional Specialized Groups. Additional groups may be defined by a wide range of unique factors or client characteristics. Such defining characteristics might include age, sexual preference, sexual victimization, medication prescribed, steroid use, having an eating disorder, grieving, and being children of alcoholics or codependent. In particular, youth who identify as gay or lesbian may struggle with assorted psychological issues that require attention in a specialized group.

Discharge, Continuing Care, and Relapse Prevention

At the completion of treatment, there should exist a structured and time-limited outpatient program and planning process that can assist the client in continuing recovery and obtaining ongoing support. This type of program is often referred to as a continuing care program (or aftercare). A smooth transition from treatment to discharge and then to continuing care requires coordination of goals and treatment, identification of personal signs of relapse, family involvement, and linkages to other services as necessary. The AOD treatment program should be prepared to assist the youth if relapse occurs. Relapse does *not* mean that treatment was a failure. Rather, it can be viewed as a bridge to the provision of new information and an opportunity for emotional and intellectual growth.

There is now an emerging body of knowledge that focuses on the problems of relapse among AOD-abusing teenagers. Programs need to be sensitive to the warning signs of relapse, strategies to manage the prolonged abstinence syndrome (such as stress management), and strategies to prevent relapse. For instance, adolescents should be provided with opportunities to discuss the emotional, behavioral, and environmental stimuli that were associated with their drug use and to develop strategies to counteract these triggering factors. Two elements of relapse prevention are the preparation of a recovery plan, often called aftercare planning, and continued program affiliation after

the client has completed primary treatment. Many continuing care programs have specialized groups for relapse prevention, while other specialized groups focus on making the transition from intensive treatment to a lower level of care.

Central to continuing care is the need to assess client progress during the followup period. Some programs will make followup contacts on a random sample of a small percentage of clients; others will hire a followup service to conduct the work and prepare a report about the results. It is common to contact clients at either 3 months or 6 months after treatment, and then again at 12 months.

Multifamily Groups

Similar to their AOD-abusing adolescents, families can benefit from group therapy. Multifamily groups, which may or may not include the presence of the client, may be utilized. In this setting, families are able to learn that they are not alone in their present struggles; they are assisted in fostering expectations that treatment will work and are aided in evolving either unique or common solutions to problems. A series of planned lectures is often a component of multifamily group therapy.

Psychiatric Interventions And Services for Dually Diagnosed Individuals

Dual diagnosis is a relatively new term that refers to the coexistence of AOD abuse and psychiatric disorders. A complete assessment—including a lifetime diagnostic evaluation, treatment trials, and clinical progress over time—will help to establish whether an adolescent's disorder is primary to, secondary to, or independent of another existing disorder.

The decision regarding whether to treat the AOD abuse or the psychiatric disorder(s) first is a difficult one. The general rule is to immediately treat the disorder that is most acute in presentation, that most interferes with present function, that immediately threatens the adolescent's life, or that has an organic origin and can be medically treated. There are other circumstances that must be considered when two disorders, such as AOD abuse and major depression, can be treated concurrently. Treatment planning, consultation, and continued assessments can help to address these decisions.

When treating dually diagnosed adolescents, it is of paramount importance that programs maintain a policy of abstinence from all AODs. Medication either for detoxification or for the treatment of psychiatric disorders must be done under the direction of a physician. It is recommended that youth receive supplemental counseling regarding their psychiatric medication.

Some of the major psychiatric and behavioral problems identified as coexisting with substance abuse include:

- Suicidal behavior
- Affective disorders
- Anxiety disorders
- Conduct and oppositional disorders (including homicidal and violent behavior)
- Self-harm (cutting behavior), differentiated from suicidal behavior
- Eating disorders
- Victimization of sexual abuse, physical abuse, or other traumatic experiences
- Dissociative disorders
- Psychotic disorders (including schizophrenia and unipolar or bipolar depression)
- Attention deficit disorders (including learning disabilities and hyperactivity)
- Post-traumatic stress syndrome
- Chronic illness.

Coexisting psychiatric disorders can interfere with AOD abuse treatment, and if they are left untreated, the client is more vulnerable to relapse. AOD abuse treatment staff should be able to identify and either treat these disorders or provide appropriate referrals for treatment. For example, a consultant may be needed to conduct mental health assessments, or the adolescent may need to be referred to an outpatient mental health program. It is important that staff be aware of the special problems of the young person who is dually diagnosed with AOD abuse and a mental disorder, and it is vital that the gathering and sharing of clinical data, formulating a diagnosis, and planning intervention for these special-needs clients be conducted by a treatment team. Staff should also be aware that dually diagnosed patients whose non-AOD disorder is on the DSM-III-R Axis I disorder tend to be "fragile," and transitional confrontational treatment techniques are counterproductive and may exacerbate the concomitant health disorder.

Uncertainties remain regarding the use of psychoactive medication for dually diagnosed adolescents. Much of the reported experience to date relates to the study of dually diagnosed adults or is based upon anecdotal observations of adolescents. Therefore, pharmacotherapy for AOD-abusing adolescents must be accompanied by close observation and the monitoring of target symptoms.

Once medications are prescribed, the following guidelines are recommended:

- The adolescent's therapeutic response should be monitored over time, based on general clinical impressions and, if available, assessment scales.
- Follow-up medication appointments are mandatory.
- The medication regimen should be reviewed as part of treatment planning.
- Medications that are given at the treatment facility (for example, intensive outpatient programs) should be dispensed to ensure the safety and security of clients. This is especially crucial for those adolescents with a history of impulsiveness or suicidal

behavior. Generally, parents or guardians should be responsible for dispensing the medication, particularly in the case of less intensive outpatient programs.

- Policies and procedures regarding the dispensing and taking of medication should be written and recorded in the program's policy handbook.
- Program staff and patients need to be informed by the prescribing physician of the benefits, potential side effects, and potential interactions with other prescribed or over-the-counter medications taken by the adolescent.
- Special precautions should be taken with adolescent girls because of the potential adverse effects of some medications upon pregnancy or fetal development. A menstrual history should be taken and a pregnancy test administered before medications are prescribed.
- Clients should be counseled to deal with the purpose and effects of taking psychotropic medications during recovery and to cope with possible pressure from peers and others to discontinue medication.
- The use of stimulant medication for attention-deficit hyperactivity disorders or minor tranquilizers for anxiety disorders is still controversial for AOD-abusing adolescents. Some of these medications have the potential for addiction or abuse. Nonaddictive medications, as well as behavioral and psychotherapeutic interventions, should be considered before medications with the potential for addiction or abuse are prescribed.

Self-Help

Exposure to self-help meetings that are appropriate for the age, gender, and culture of adolescents is frequently of therapeutic benefit. These meetings, which can be utilized during and following primary treatment, are valuable adjuncts to outpatient services for the teenager during the recovery process. Self-help groups offer positive role models, new friends who are learning to enjoy life free from AODs, people celebrating sober living, and a place to learn how to cope with the stresses and strains of life. A 12-step model is the most common structure of a self-help approach, yet other strategies may be appropriate, such as Rational Recovery and religious programs.

Detoxification Services

Adolescents requiring detoxification may be treated as inpatients or outpatients. It is rare for an adolescent to develop a potentially fatal abstinence (withdrawal) syndrome. However, an adolescent's particular psychosocial circumstances, personal characteristics, or addictions (to barbiturates, for example) may mandate inpatient care. The process begins with an assessment of the client's need for detoxification and a determination of the most appropriate site for the provision of such treatment. Whether on an outpatient or inpatient basis, detoxification should be monitored by appropriately trained personnel under the direction of a physician with specific expertise relative to the consequences and management of addiction and abstinence.

Intervention

The term "intervention" refers to treatment service with the aim of intervening in the progression of AOD abuse and encouraging the client to enter treatment. The most commonly used intervention was developed by Vernon Johnson and popularized by the Johnson Institute.[3] The intervention process includes strategies that focus on convincing individuals that they have an AOD problem, helping them to recognize the need for treatment and, eventually, changing their behavior.

Interventions typically involve a carefully rehearsed and controlled meeting with the client, significant others, and a professional in attendance, although interventions that do not include a professional may also be successful. During these meetings, adolescents listen to information about their chemical use and to the concerns and feelings of the members of the group. The goals of interventions are to alert adolescents to the perceptions and concerns of the important people in their lives regarding their AOD use, and to convince them that the next step is to receive a formal screening and assessment by appropriate professionals. If appropriate, a plan for entering treatment can be presented to the adolescent.

Interventions can be powerful and effective tools for motivating adolescents to enter treatment, for overcoming the denial of family and others about the possible AOD problems, and for strengthening the generational hierarchy and authority of parents. Moreover, interventions can take the form of social or institutional leverage. For example, pressure from the courts, probation officers, and schools can be used to encourage the resistant adolescent to seek treatment.

Caution should be exercised when interventions are conducted by professionals who are also employees of the treatment program. Such a situation may discourage objectivity on the part of the intervention specialist, who may be overly focused on referring a client to his or her treatment program.

Home-Based Services

Specialized therapeutic services can be provided in the client's home for youth who are at risk of out-of-home placement. Home-based service is a relatively new concept, and not available in many parts of the country. Santa Fe, New Mexico and Montgomery County, Maryland are two areas where such services are offered. These services are time limited—usually for 6 to 15 weeks—and involve an active intervention into the family process. Home-based service is a new movement, based on the family preservation model, and may be an excellent

option for geographically hard-to-reach families.

Educational Services

Adolescents in a program such as partial hospitalization, where the requisites of treatment preclude attendance at an outside school, must have access to educational services. Such services should address the remedial needs often encountered within this population and provide age-appropriate educational materials. Spending time in treatment should not be allowed to accentuate educational deficiencies and further disadvantage the development of adolescents.

Program Issues

The following issues should be important considerations to practitioners or other agency staff who are either treating or referring adolescents to an outpatient treatment setting. Some of these issues may require collaboration with other professionals and agencies in the community. Some are administrative in nature. All items on this list are predicated on the belief that the treatment process involves matching the adolescent's problems and needs to the appropriate level and type of treatment services.

Program issues include:

- Program design
- Policies and procedures manual
- Development of a treatment plan
- Geographic proximity to clients
- Monitoring client progress
- Length of stay and intensity of treatment
- Collaboration with referral agencies
- School program
- Vocational program
- Client contracts
- Legal issues
- Supervision, continued quality improvement, and staff training
- Program evaluation
- Cultural issues
- Community issues
- Pregnant and parenting teens.

Program Design

Each program is unique and is defined by its community, incorporating various components of treatment and resolving different program issues to best match client needs with available resources. When developing a program or assessing an extant program, the following features should be considered:

- A mission statement
- A values statement
- A theoretical conceptual model
- Treatment components and modalities
- Staffing decisions
- Expectations.

A mission statement is needed to clearly identify the program's purposes. A values statement can identify general program principles, and a theoretical conceptual model can identify the underlying principles shaping the program design and treatment philosophy. Treatment components and modalities must be identified that can provide the most comprehensive treatment possible.

Funding limitations and the scope of program services dictate real limits on the number and depth of treatment components that a program can provide. However, it is vital that the most critical treatment issues be identified and implemented with skill and timeliness.

Staffing decisions need to be made with attention to program needs, job descriptions, and educational and experiential requirements for each position. A determination must be made regarding which services will be provided on site by program personnel and which need to be provided by arrangement with an external agency or professional. If volunteers are to be an integral part of the program, then specific policies must be established as to their supervision and limits of responsibility.

Finally, expectations for successfully completing treatment should be clear and as objective as possible.

Policies and Procedures Manual

A program manual provides the guidelines for operating the program. This document provides a formal and standardized record of the program's policies and procedures and of the Federal, State, and local regulations and requirements for contract compliance. Staff members and clients are protected by these regulations, which, if violated, could result in legal difficulties. Areas of concern would include:

- Program mission statement identifying the underlying program principles, including the program's commitment to a drug-free workplace.
- Confidentiality procedures for both staff and clients.
- Documentation guidelines and requirements for client charts, including reporting requirements for sexual abuse, physical abuse, suicidal behavior, and violent behavior.
- Personnel policies that address hiring, firing, discipline, Equal Employment Opportunity guidelines, professional standards and behavior, benefits, grievance procedures, impaired professional concerns, drug testing, fingerprinting, hiring of staff with histories of certain categories of felonies and misdemeanors, developing relationships with current or former clients, employee assistance programs, use of staff who are in recovery, AOD use regulations for staff, role of employee unions or boards of directors, and malpractice coverage.
- Policies concerning critical incidents, such as involuntary commitment, emergency procedures (for example, suicide or violence), and inappropriate behavior (such as drug use) during treatment.
- HIV guidelines and staff training should address the universal precautions as recommended by the Centers for Disease Control

(such as guidelines on the use of rubber gloves), who should know the HIV status of the client or family members, and the policies and procedures for HIV testing of clients and staff. Programs may wish to designate a staff person as the AIDS trainer. HIV training helps to counteract the mistaken belief that there are no HIV issues among adolescents.

Development of a Treatment Plan

A treatment plan should be developed by the primary therapists or treatment team in concert with the client, family, family collaterals, and, when possible, representatives from the referring agency. The treatment plan should be comprehensive, specific, and objective so that progress can be measurable. At a minimum, a treatment plan should identify target problems, treatment goals, objectives, interventions, and a schedule for updating.

- **Target Problems**: Identification of the individual's and family problems, including AOD abuse and psychosocial, medical, and possible psychiatric disorders.
- **Goals**: Specification of goals to help clients recognize their AOD involvement and to acknowledge responsibility for the problems resulting from AOD use.
- **Objectives**: Identification of realistic and measurable objectives for achieving each goal.
- **Interventions**: Specification of the treatment strategies and services that are needed to achieve the objectives. This includes identification of persons who will be providing treatment, an expected timetable for achieving the objectives, the date the treatment plan will be reviewed, and where treatment is to take place. Treatment strategies should be reviewed with the client and the family, after which time strong consideration should be given to the preparation of a written treatment contract. All involved parties should sign this contract and receive a copy of it. The treatment plan should be subject to frequent reassessment to determine whether the client is making therapeutic progress. If progress is not being made, the client and therapist should discuss the reasons, and possibly change the objectives or interventions to facilitate future progress.

Geographic Proximity to Clients

The extent of client participation in treatment may be determined in large part by the geographic proximity of the client to the treatment center. Because adolescents may require public transportation, it is desirable to locate programs near transit systems. It may be necessary for the program to make arrangements for bus or subway fare to be provided to clients and families. Satellite offices help to reduce the problem of geographic distances between clients and services.

Monitoring Client Progress

Monitoring the adolescent's treatment progress typically includes: 1) receiving feedback from members of the treatment team, 2) obtaining reports from the adolescent, 3) getting reports and feedback from family, school, and employers, and 4) getting results of laboratory tests. Random drug screening is a potentially powerful tool in breaking through the denial of drug use and in encouraging a drug-free lifestyle.

Length of Stay and Intensity of Treatment

By determining the type and extent of the client's problems, the length and intensity of treatment can be provisionally determined. Of course, treatment progress will also affect treatment intensity. When several service options exist, it is preferable to match the severity of the adolescent's problems to treatment intensity, program design, and program resources. Matching may also involve the role of nontreatment factors (such as gender or race). Unfortunately, too often, limitations on program resources restrict the length of treatment and opportunities to implement diverse treatment options.

Collaboration and Communication with Referring Agencies, Collaterals, and Community Services

Interagency agreements, also called *memos of understanding,* should be written when a youth is involved with several different agencies. Interagency agreements are especially important when the client is involved with the juvenile justice, child welfare, or school systems. Payment issues, funding problems, and mutual goals for the client should be described in such agreements. Also, guidelines for confidentiality need to be established, and discussions should focus on potential problems or key issues for which different agencies may have different policies (such as protocols for handling the student who is found to be carrying drugs).

School Program

A school component, as an adjunct to treatment, is relevant to day treatment programs. Some States have mandatory laws requiring adolescents to receive several hours of classroom schooling while in treatment. Issues to consider include: What are reasonable academic expectations for the client? What criteria and procedures will be used to determine if the client has special educational needs? To whom should the adolescent be referred for specialized educational testing? How are the adolescent's treatment and educational needs coordinated? If necessary, how will these needs be coordinated with the juvenile justice and child welfare systems?

All staff working with the youth need to be sensitive to the client's

educational needs. Staff should be advocates for the adolescent's continued participation in school, even when it is not mandated by law.

Vocational Program

Vocational concerns should be an integral part of the initial assessment process. Because many outpatient programs cannot directly address the vocational needs of clients—often because of the lack of vocational training resources and specialists—it is important to attempt to develop collaborative agreements with local vocational programs. Job readiness and occupational skills are important for adolescents in preparation for independent living. Without these skills, youth may be more likely to support themselves through illegal activities, and may be more prone to relapse.

Client Contracts

Behavioral contracts, including sobriety contracts, can be useful treatment tools. Behavioral contracts with the client should include: specific treatment goals organized around specific client target behaviors; concrete descriptions of the consequences to the client if the contract is or is not followed; specificity regarding situations that apply to the contract; the time frame during which the contract is active; and options regarding contract revisions. The contract should be signed by the client and primary counselor, with copies distributed to both parties.

Legal Issues

Program design and operations should be considered from a legal perspective to ensure compliance with Federal and State guidelines and to protect the organization from liability and lawsuits. Legal issues should be discussed in the program's manual on policies and procedures. These issues include: personnel (hiring guidelines, equal opportunity regulations); child welfare and protective services; juvenile justice; sexual and physical abuse; reporting crimes; HIV testing and status; confidentiality; liabilities; custodial and separation agreements; clients' rights; involuntary mandatory commitment; and release of information.

Supervision, Continued Quality Improvement, and Staff Training

These areas include treatment utilization review, peer review, medical records review, client satisfaction ratings, and continuing education for staff. Teamwork and team building among staff provide opportunities, through weekly meetings and staff retreats, for increasing the levels of trust among program staff. Team and individual clinical supervision are recommended.

Program Evaluation

Every treatment facility must provide for some form of continuing assessment of program efficacy. At times, such evaluation is external; that is, assessment is carried out by licensing, accreditation, and funding agencies, often for the purpose of monitoring compliance with Federal, State, and private agency regulations. Alternatively, evaluation may be internal and carried out by staff and clients. The value of such assessment is more dependent upon the measures utilized than upon whether it is external or internal.

All too frequently, assessment is based upon the number of clients seen, the maintenance of a desired census level, or adherence to the regulations or protocols without regard to outcome measures. At times, programs of high quality are viewed as ineffective based upon data which have no proven correlation to effective services or long-term client success.

Although the cost of care, efficiency in treatment, provision of categorical services (as previously noted), and adherence to regulations are certainly of importance, the true worth of a treatment program must be measured by the success of its clients. Evaluation of success must be ongoing and apply both to adolescents who are under treatment and to those who have been discharged from care. It is the obligation of the treatment program to provide for the continuing assessment of client progress, both as assessment applies to an individual adolescent and to the group under care. Subsequent to discharge, efforts need to be made to evaluate the continuing behavior of the adolescent. It is understood that obtaining accurate information regarding the maintenance of abstinence and success in other life skills may be difficult, expensive, and time consuming. Such difficulties with the evaluation of long-term outcome have been pervasive within the field of AOD abuse treatment, and remain an obstacle to assessing the efficacy of a specific program and to comparing the effectiveness of differing treatment approaches. Nevertheless, each program has an obligation to attempt to characterize the long-term success or failure of adolescents discharged from care, and to apply knowledge gained to the process of refining treatment initiatives.

Cultural Issues

Clients in treatment often have different cultural values, beliefs, and customs. People from some cultural groups may see therapy as invasive. These issues should be addressed in clinical staff meetings, interagency collaboration, and at all levels of the organization. The goal is to enhance cultural sensitivity and cultural competence. Also, bilingual staff and written materials (covering issues ranging from program policies to bibliotherapy) are important when non-English-speaking clients are in the program.

Community Issues

Networking with community services, understanding the

community's reaction to the program's presence, and establishing a community advisory board are key issues. It cannot be overstated that a commitment by the program to community involvement is vital for the success of an adolescent outpatient treatment program.

Pregnant and Parenting Teens

Adolescent parents and pregnant teenagers with AOD problems have special needs that must be addressed in the design and development of program services. (See "Treatment Components" segment of this chapter under "Other Specialized Groups.")

Staff Issues

Staffing issues for adolescent outpatient AOD abuse treatment programs include:

- Delineation of core staff and their essential roles
- Additional staffing possibilities
- Staff skills development
- Utilizing recovering people as staff
- Staff certification and credentials
- Cultural diversity
- Staff supervision and evaluation
- Community involvement.

Delineation of Core Staff And Their Essential Roles

The type of outpatient program and the range of services offered within the program determine treatment staffing patterns. Representatives from the following disciplines are to be considered core staff:

- Program or clinical supervisor
- AOD abuse counselors
- Therapists (Master's level, AOD abuse-certified preferred).

The essential roles of core staff include:

- Intake
- Screening
- Assessment (including a cultural assessment)
- Case management
- AOD treatment (individual, group, family)
- Specialized education on such topics as understanding AOD abuse, HIV infection and AIDS, other sexually transmitted diseases (STDs), and tuberculosis
- Planning continuing care and treatment.

Additional Staffing Possibilities

As the intensity of the outpatient treatment increases, programs may require additional personnel. These professionals may be hired as part-time staff, as consultants, or as provided by contract or referral:

- Psychiatrists
- Pediatrician internist and/or family practitioners
- Psychologists
- Nurses
- Recreational therapists (leading activities in art, music, drama, wilderness outings, and the like)
- Occupational therapists
- Outreach workers
- Home intervention workers
- Continuing care workers
- Cultural advisor or spiritual leaders
- Students, interns, and fellows (from local colleges and universities).

Staff Skills Development

Because of the multiple complexities of the AOD-using adolescent, clinical staff require training and supervision. Yet, high-level skill or expertise may not be necessary for all staff in all areas. It is most important, however, that there be regularly scheduled training that occurs periodically throughout the year. This is much better than training presented in *ad hoc* situations to address a crisis or acute issue. Training should be available in the following areas:

- Addiction and treatment
- Family dynamics, family therapy training
- Adolescent growth and development
- Sexual and physical abuse
- Sexuality
- Gender issues, including gender and sexual identity
- Mental health problems (such as depression, anxiety, and other disorders)
- Cultural and ethnic issues
- Recreational activities
- Psychopharmacology
- Group dynamics, group therapy
- Suicidal behavior
- Grief and loss
- Referral and community resources
- Management of oppositional and violent behaviors
- Cognitive impairments (learning disabilities, attention deficits, organic mental disorders)
- Legal issues (custody, juvenile justice issues)
- Treatment planning and documentation
- HIV issues
- Other health issues (STDs, TB, nutrition)
- Gangs
- Drug dealing.

Utilization of Recovering People as Staff

Treatment programs frequently utilize recovering alcoholics and drug abusers as staff. Staff who are in recovery can offer unique hope, role modeling, and special insight into dependency, addiction, and recovery. When recovering individuals are hired, it is important that they be required to have the same level of expertise and training that are required of other staff. There must be clear evidence of recovery and abstinence, usually as represented by 2 to 5 years of sobriety and freedom from drug use. When hiring staff in recovery, the clinical supervisor should be sensitive to his or her own recovery issues, as should all staff members.

Staff Certification and Credentials

Each State will have different requirements for the certification of AOD abuse counselors. Programs should encourage all staff to become certified. Certification is available in

many disciplines; for example, a nurse can be certified in chemical dependency, and a physician can become a certified addictionologist. Records documenting these credentials are necessary. Staff should be supported in maintaining continuing education efforts to enhance their clinical competence in their specialty.

Cultural Diversity

Staff should represent the cultural diversity found in the client population. Continuing education, staff development, and outreach efforts during staff recruitment that are both innovative and intensive may be needed to improve cultural competence among staff. If a significant part of the client population is non-English-speaking, at least one staff member should be bilingual and bicultural. The program itself will need to be aware of the many cultural factors affecting program design (physical environment of facility, program materials, etc.). Because cultural diversity is a regional issue, programs need to avail themselves of appropriate community resources.

Staff Supervision and Evaluation

A supervisory review of the staff's performance should be conducted regularly. Opportunities for self-evaluation by staff and feedback from other staff and team members can be included in the evaluation process. The program's manual on policies and procedures should address how the program deals with staff turnover, burnout, and related staff problems, and the specific procedures for staff reviews.

Supervision should include: training staff on program procedures and policies, developing clinical skills, monitoring performance and providing feedback, identifying clinical limitations, and addressing transference and countertransference (such as relationships and identification between the adolescent and treatment personnel), and dealing with staff concerns.

Community Involvement

Staff should be encouraged and supported by program management in active community involvement, a task that often goes "above and beyond" a person's official job description or title. Outpatient programs often must rely on staff from other community programs to complement their services or to provide staff training. Building a broad community base can enhance the program's opportunity to provide effective treatment for youth in the community.

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Endnotes

[1] In this chapter, the terms "client" and "patient" will be used interchangeably.

[2] These are addressed in *Treatment Improvement Protocol: Treatment of Drug-Exposed Infants*, published by CSAT and available from the National Clearinghouse on Alcohol and Drug Information (NCADI), P.O. Box 2345, Rockville, MD 20852; (800) 729-6686.

[3] Johnson, V.E. 1986. *Intervention: How to Help Someone Who Doesn't Want Help.* Minneapolis: Johnson Institute Books.

Chapter 4—Inpatient Treatment For Adolescents

The components of this chapter were derived by identifying a common profile of the adolescent requiring inpatient care for the treatment of alcohol and other drug (AOD) abuse. These client characteristics were used as the basis for developing guidelines for an intensive inpatient program for adolescents, where a full range of services is provided in a protected residential setting. This section represents a consensus regarding those program elements that should be present in residential treatment for the adolescent AOD-abusing population. The theme of a multidisciplinary approach is emphasized throughout. The elements presented are intended as guidelines, with the understanding that programs will need to tailor these recommendations to meet particular circumstances.

Introduction

Historically, it has been the practice to refer AOD-abusing adolescents to inpatient settings. This practice was based upon a belief that it was impossible to treat adolescents in outpatient settings. Recent evidence would suggest that this bias is unfounded. Indeed, comprehensive planning efforts for adolescents should include outpatient components for young people, many of whom will succeed without inpatient care. However, for those adolescents with more complex or serious problems relating to AOD abuse, inpatient treatment has many clinical advantages.

One advantage of inpatient care is that treatment may proceed within a secure setting protected from the influences and stresses of the drug-using community. Placement within residential treatment may help to diffuse the emotional intensity of a family or personal crisis. Inpatient care allows for treatment within a therapeutic milieu where both staff and peers can assist in the rehabilitative process. Time will be available to explore problems in depth. Families will also have the opportunity to delve into the causative factors of AOD abuse, to make changes, and to plan for the adolescent's eventual discharge. Residential care allows for an intensity of treatment not available on an outpatient basis. Progress through treatment can be closely monitored, and decisions regarding changes in therapy, increasing privileges and responsibilities, discharge, and continuing care can be based upon such close observation of progress. Certainly, inpatient care is not necessary for every AOD-using adolescent. However, it does offer opportunities for successful outcomes not readily available on an outpatient basis.

Determining what level of care is optimal for a particular adolescent is discussed elsewhere in this text. (See chapter 2.) In general, the adolescent suitable for residential treatment is the one who is using AODs with increasing frequency and who is experiencing difficulty in many areas of his or her life. These areas include ways that the adolescent is functioning within the family, school, and community. Adolescents who are out of control secondary to AOD abuse need to confront issues systematically and comprehensively. Such confrontation is more feasible in residential than in outpatient treatment. Residential treatment is often upsetting initially and may be more difficult for families to accept than placement in less restrictive treatment programs. However, most youngsters needing this type of intervention are at immediate risk, and families have often tried other treatment alternatives. The residential setting should represent a safe haven away from community pressures and a place where the adolescent can begin to focus, start to face reality, and commence the recovery processes.

The AOD-abusing adolescent served by inpatient programs is a complex individual in need of a treatment approach tailored to his or her very special problems and needs. This adolescent cannot be treated in a vacuum but, rather, must be treated in a systemic manner which addresses family and environmental issues. Attention must be given to the wide range of individual circumstances: cultural, spiritual, and family considerations, and sexual, academic, and biopsychosocial needs. Those responsible for the design of programs should look at the adolescent as a multidimensional individual who will do best in a multidimensional, age-appropriate, developmentally directed and focused program. The program

design should closely follow the developmental stages of the adolescents in the program. As with any services for adolescents, the staff must be flexible, adaptable, and able to focus its services on the different adolescents in treatment at the same time, meeting each at his or her developmental level. Treatment staff must be well versed in adolescent development and adolescent needs.

The approach to residential treatment set forth in this protocol can be likened to the process of painting a house. For the new paint to last a long time, one must get down to the bare wood by scraping away layers of paint. Only when this process is complete can the wood be primed and layers of new paint added. The program that addresses such complex family needs as violence, sexual abuse, AOD abuse, and mental illness will have more positive outcomes for the adolescents in treatment.

Inpatient treatment for adolescents involves removal of the young person from the home and community and placement in a safe setting for a period of time that is in accord with their needs and progress. Unfortunately, in many programs, the design of adolescent treatment is too often adult-focused and developed on the basis of an adult-directed philosophy, structure, or content.

The ideal adolescent inpatient program is one designed to respond to the needs of adolescents in their various developmental stages. It must be a system that is able to provide a common-sense response to what the adolescent lacks in her or his development. Most adolescents encountered in inpatient treatment feel disconnected from family, lead unstructured lives due to family dysfunction, and are often self medicating. They therefore require adult role models and assistance until the desire for improvement (in other words, maturity) is internally motivated, rather than externally motivated, by family or society. These characteristics of the adolescent should be the basic determinants of the content of residential treatment.

Types of Inpatient Care

Certainly there is a large variability among inpatient programs regarding models of care and length of stay. Types of inpatient care include:

- Intermediate care facilities (ICFs) or short-term (1-2 months) rehabilitation
- Therapeutic communities (6 months to 2 years)
- Halfway houses
- Group homes.

Considering the variability in programs, the approach presented in this document contains elements that are applicable to any type of adolescent inpatient treatment. This document is an attempt to view the whole system of inpatient care: from short-term to long-term, and for adolescents for whom AOD use has created moderate to severe problems.

Caution must be exercised to ensure that the adolescents referred to inpatient treatment are appropriate for such treatment. Inappropriate referral is not uncommon, and adolescents are at times sent to inpatient programs because that was the initial contact at the time of crisis. For example, AOD-using adolescents often present with suicidal behaviors or accidental overdose requiring inpatient care. When these adolescents are stabilized, and only at that time, is it possible to make a long-term therapeutic recommendation. We suggest that the adolescent suitable for intensive residential treatment is the adolescent who has demonstrated an inability to change AOD behaviors after less intense interventions have been attempted or at least considered. This adolescent is the one who has failed to make changes in other modalities and continues to fail in many areas of his or her life because of the abuse of AODs.

Other factors which might contribute to an adolescent's being placed in an inappropriate setting include misdiagnosis; significant adults' reacting to AOD use too early in the continuum; and agencies' accepting inappropriate referrals for financial or census reasons. In addition, adults often use residential treatment as a threat to youngsters. It is often seen as a punitive and manipulative alternative.

The model of inpatient care advanced in this section is appropriate for adolescents who have lost control in their lives and who are in danger of addiction or the lasting negative aspects of AOD abuse. They are abusing AODs in a discernible pattern and have centered their lives around AOD use. Most aspects of their lives have changed, and the use of AODs has become a primary focus. These adolescents need a controlled environment where they are free of chaos and exposed to structure.

A wide range of services must be available:

- Educational
- Vocational
- Individual and group therapy
- Case management
- Referral options
- Relapse prevention
- Continuing care counseling
- Emergency services
- A foundation in 12-step or other support programs and exposure to alternative lifestyles.

The program model suggested by this document, although difficult to plan and implement, is a vital part of the continuum of adolescent treatment alternatives. A major task of programs is to maintain structure while attending to the needs of those adolescents who present at different developmental levels. Consistency must be balanced with flexibility.

Essential Components of an Adolescent Inpatient Program

Programs must vary to meet the needs of special client groups, in accordance with differing treatment philosophies, and in relationship to the availability of resources. Despite these expected variations in programs, all adolescents in residential treatment share basic needs, and every program must contain essential elements. The essential components of an adolescent inpatient treatment program include:

- Engaging the adolescent in care
- Assessment
- Protocol for progression
- An individualized treatment plan
- A need for structure
- Dual diagnosis capabilities
- Detoxification services
- Pharmacologic interventions
- Arrangements with medical care facilities
- Role modeling
- Client participation in the therapeutic milieu
- Family involvement
- Group therapy
- Family groups
- Didactic and educational groups
- Family didactic sessions
- School program
- Vocational program
- Support and 12-step meetings
- Recreational program
- Transition, continuing care, and followup
- Confidentiality and communication with referring agency or individual
- Legal services
- Program evaluation
- Client progress monitoring
- Quality assurance
- Definition of success.

Engaging the Adolescent in Treatment

The parents and the adolescent should agree to participate in the treatment process. Sometimes, a written contract delineating this agreement is helpful.

Most adolescents are resistant when placed in residential treatment. The staff must anticipate this resistance, view it as part of the treatment process, and be prepared to deal with this reality. The initial period of resistance must be addressed so that it has as little deleterious effect as possible on those adolescents already engaged in various phases of the program. New clients must be made responsible for their own behavior and be able to understand that disruptive resistance will result in predetermined consequences.

The early stages of treatment are marked by an increased rate of elopement. The threat of elopement must be handled as part of the initial engagement process. The program must have:

- A specified procedure for reporting elopement to parents, police, and child welfare authorities
- Clearly stated consequences, such as loss of privileges.

The adolescent must know that his or her resistance is expected and that it is all part of the denial phase of the disease process.

Assessment

Upon admission to the residential facility, the following assessments should be completed by the multidisciplinary treatment team:

- Medical and health history and assessment
- Biopsychosocial assessment—this includes family history, AOD use history, and social history
- Educational and vocational assessment
- Psychiatric consultation and assessment, if applicable
- Cultural assessment
- Spirituality assessment.

Sources of information for the assessment include the client, family members, juvenile justice and social services representatives, and other referral services.

Excellent computerized assessment and diagnostic tools have been developed for substance abuse. It is recommended that these types of instruments be incorporated into the adolescent treatment process, both at the screening stage for treatment and again during the routine assessment and monitoring phases for all treatment components. (See the TIP, *Screening and Assessment of Alcohol- and Other Drug (AOD)-Abusing Adolescents.*)

Particularly useful are self-assessment instruments that the adolescent client can use, personally keying in information. Today's adolescents have grown up with computers. They have an intrinsic understanding and instinctive trust of the total objectivity of the computer. The computer is not viewed by the adolescents as just another critical adult telling them what is wrong in their lives. Thus, when the computer arrives at the recommended diagnosis, this diagnosis is often accepted by the adolescent *carte blanche,* as opposed to the typical resistance that could be expected if the diagnosis and recommended treatment interventions were given by the adult therapist. This recommendation for the use of computerized self-assessment is made in the spirit that utilization of the computerized diagnostic process is a tool to be used by the professional caretaker and is not a replacement for the human factor.

Protocol for Progression

There should be a clear description of the progression and stages of treatment provided to both the adolescent and the family. Criteria for success in each phase must be defined, as well as how and when additional privileges can be earned.

An Individualized Treatment Plan

Adolescents enter treatment with differing needs and diagnoses. A treatment plan should be designed

to meet the specific needs of the individual client. The treatment plan should be discussed with the adolescent and the family.

Based on the treatment team's determination of the particular client issues to be addressed, an individual treatment plan will be developed which includes: 1) identification of individual problems, 2) specific goals, such as helping the client to recognize his or her dependency on AODs and become able to acknowledge responsibility for AOD problems, 3) objectives for achieving the goals, 4) the client's own definition of the problems, and 5) development of goals by the young person, following initial counseling. The most important factor in developing a plan which, if followed, can result in positive outcomes, is the involvement of the adolescent in establishing his or her own treatment protocol and direction. This helps to ensure that the client will recognize that goals have been set and can be modified as more needs are uncovered during treatment.

A Need for Structure

Programs for adolescents must establish structure or reestablish the structure that was missing in their lives. Adolescents and families must clearly know rules and expectations. They must learn the necessity of adhering to a treatment contract and the reasons for rules.

All adolescent inpatient programs need a well-defined structure. The structure of an adolescent treatment program is as important as the therapeutic aspects of the approach. The adolescent needs to embrace the program philosophy if treatment is to be successful. By the same token, the adolescent must understand the rationale behind the structure and then be encouraged and taught to have a part in the continuity and maintenance of this structure. The adolescents in any program should view increasing responsibility as a privilege that is to be earned.

In general, adolescents thrive with structure and clear expectations. Programs that are more structured have fewer problems with adolescents absconding. When every day is planned, organized and full, the adolescents feel a sense of involvement. The more the staff are actively involved with the adolescents, the better adolescents do in treatment. Adolescents crave connectedness and attention.

Adolescent clients respond best to a program structure that is described clearly at the time of orientation and to an understanding that all clients will be expected to adhere to rules and regulations. Addressing noncompliance with program guidelines provides the adolescent with opportunities for experience with conflict resolution. A structure facilitates safety and feelings of security, and corresponds well with the concrete thinking of the early or immature adolescent. Having the program guidelines clearly outlined helps teenagers to begin to establish and reestablish boundaries, and allows them an opportunity to learn accountability for their behavior.

A well-defined program structure corresponds to the developmental needs of the adolescent age group in that it simulates responsible parenting and the creation of a familial type of living arrangement. As the adolescent progresses in treatment, the rigidity of structure may be decreased. Concomitantly, the teenager is allowed increasing personal responsibility for actions when he or she is able to handle responsibility and to grow and mature. This increasing responsibility corresponds to healthy development where the stages of life are negotiated gradually and according to individual needs and accomplishments. Tight structure that is gradually reduced makes it possible for treatment staff to set requirements for each adolescent as he or she progresses through the program. Adolescents learn about expectations and are allowed to feel a sense of accomplishment at each level of success.

Structure helps adolescents to chart a course and to recognize beginning and end points. Often, such structure has been lacking in the life of the teenager due to personal or family dysfunction. Therefore, the inpatient AOD abuse treatment program can use structure to model successful parenting through providing meaningful and useful boundaries, and permitting the creation of an atmosphere in which the adolescent can begin to address missed developmental stages. Structure gives the adolescent a sense of the closeness and belonging normally present within healthy family systems.

Dual Diagnosis Capabilities

Comprehensive adolescent programs should be able to address adolescents presenting with AOD abuse and psychiatric disorders which are often characteristic of troubled adolescents. These disorders include: depression, borderline personality, eating disorders, suicidal ideation and attempts, and self-mutilation. The program should vigorously treat the presenting problem, AOD abuse, and then address other issues as a normal part of comprehensive treatment.

Many adolescents who need comprehensive residential treatment present with a dual diagnosis. These adolescents can be managed in the AOD abuse treatment program, as long as the program is designed with the various other problems in mind. Certain conditions are poorly managed in a residential setting when they are too disruptive to a homogenous population. These kinds of issues can be dealt with and managed in a residential setting as long as the adolescents can be determined not to be a danger to themselves or others. Problems are multi-dimensional; treatment also must be.

Guidelines need to be established by each program in line with its philosophy of treatment and resources, regarding the appropriateness of treating the dually

diagnosed adolescent, along with clients who have only a primary diagnosis. With proper planning, most behavioral problems can be successfully treated in the majority of inpatient settings.

Detoxification Services

There must be adequate assessment capability available to determine if the client needs detoxification.

Acute abstinence syndromes are uncommon in the adolescent AOD-using population. Therefore, it is not mandatory that every inpatient program be able to provide detoxification services. However, when these services are unavailable on site, there should be an arrangement with a hospital or other medical setting where adolescents in withdrawal can receive care. In view of the occasional need for detoxification and the more frequent occurrence of other medical conditions, complete medical evaluations prior to admission to a nonmedical model residential setting are recommended.

If detoxification is to be provided in the adolescent treatment setting, trained personnel, supervised by a medical director, must be available.

Pharmacologic Interventions

Inpatient programs need to maintain a policy of strict abstinence from any use of AODs and should espouse a clear, unwavering policy around illegal substance use. However, adolescents needing pharmacological interventions for any physical or mental health problems should never be denied access to treatment. Prior to admission, these youngsters should be closely evaluated as to their appropriateness for the specific treatment facility and, if it seems appropriate, a medical protocol should be established and followed. Each adolescent needing pharmacological interventions should be closely monitored by medical personnel. The extent of pharmacological interventions must be adjusted in accord with the capability of the particular program, and written protocols concerning this issue should be available and followed.

Arrangements with Medical Care Facilities

Additionally, inpatient programs should have quality service arrangements with easily accessible medical facilities so that emergency or more intensified medical procedures may be carried out when necessary.

A medical emergency folder with all proper authorizations and pertinent signatures must be kept on hand for those emergencies. Information must be updated regularly.

Role Modeling

Those adolescents who are settled and working within the structure should have a clear role in the program. They must be helped to work cooperatively with the staff. These young people may serve as role models for newer residents. New clients in the program may use older clients as advocates and mentors. As with positive peer influence in groups, role modeling has a place in every aspect of programming. When adolescents currently in treatment model adherence and belief in a program, the novices are more likely to follow.

Client Participation in Therapeutic Milieu

Adolescents should be helped to run and maintain the facility, and, within limits, alter the therapeutic structure. With staff guidance, they should have a role in making decisions.

The adolescents also should be able to plan, give input to, and be responsible for the operation of the facility. Adolescents must be responsible for their own personal space and belongings. In addition to this, it is helpful for them to participate in assigned work crews created for facility upkeep. Such participation helps adolescents to feel a sense of completion, leadership, and responsibility. This sense of purpose is something often missing in the life of an AOD-abusing adolescent. Many adolescents report that they were given positive feedback and reward only because adults felt sorry for them. Real earned accomplishments are ego enhancers and need to be built into residential programs. Pride of ownership in a program helps with feelings of positive self-regard.

Staff and adolescents should be a team. Adolescents who have progressed to certain levels should be encouraged to accept leadership, act as peer counselors, help with orientation, help maintain structure, have input into disciplinary concerns, and have a role in helping newer residents to adjust. Adolescents are capable of being advocates for one another.

Family Involvement

When possible, parents should participate in all the required phases of their child's treatment. Since most AOD-abusing adolescents live in problematic families, these families should also agree to enter treatment. Parental education, groups, and nuclear family therapy should be part of the adolescent treatment program. AOD abuse, sexual abuse, violence, and criminality are intergenerational and should be treated as such in an attempt to stop dysfunctional patterns. Parents should be helped to deal with their own AOD abuse, sexual abuse, and other issues that perpetuate family dysfunction. Parents must be engaged, empowered, and helped to see their roles as part of the solution, not just as part of the problem. They must relearn parenting skills in the context of proactive parenting designed to best help the adolescent with AOD problems.

Group Therapy

Group therapy allows adolescents the opportunity to identify those feelings that may be contributing to AOD-use behavior. Through sharing, discussion, and confrontation, adolescents are better able to face their problems.

Group therapy is an important part of treatment for this age group. A connection with peers is important to most adolescents, and positive peer pressure can be applied in group therapy. Group therapy can provide motivation to the adolescent and facilitate the exploration of salient issues. The group is often a powerful vehicle in promoting introspection and providing the adolescent with a sense of power to control his or her decisions and destiny.

Group therapy, because of the positive pressure it provides, should be viewed as a mainstay of any adolescent inpatient treatment. For adults, it is most often more productive than individual therapy. Validation from those at the same developmental level is therapeutic and healing. The recognition of like experiences and similar thinking helps to foster inclusion and to allow for stabilization of the younger person. Frequently, the peer group is the most effective modality in achieving therapeutic gains. The therapist is the choreographer, but the adolescents set the pace and the tone as they help each other.

It is important to use an eclectic approach to group therapy, including behavioral, psychoanalytic, communication, and reality therapy. All of these are approaches that might be used by the adolescent-oriented group therapist.

It is recommended that group therapy be a daily occurrence and that all adolescents participate. Agreements can be made regarding who will share his or her issues in the next sessions of group therapy. This scheduling is very important and beneficial to adolescents. They need to know on which day it will be their turn, so they can plan ahead. Adolescents want to know: Where am I? What's next? What will we be doing tomorrow? Knowing the answers to such questions enables them to begin to exercise control over their lives in terms they can accept. The group process should assist the adolescent in formulating a manageable conception of personal problems and solutions. They therefore can attack issues in an organized fashion that best meets each adolescent's specific needs. The basic goal of the therapist is to allow the adolescent to become comfortable and begin to talk about his or her experiences in a safe setting.

The role of the group therapist is to help the adolescent gently peel away layers of feelings and problems that are precursors to AOD abuse. Adolescents will begin by revealing safe issues, and when trust is established, they will address deeper core concerns. Adolescents can be helped to see their AOD abuse as a symptom that helps to medicate painful feelings. They can be helped to gather all their symptoms into a manageable tapestry and begin to attack them in a way that feels safe. The adolescents can experiment with different feelings, watch for reactions, and evolve a personal treatment plan. Myriad issues are characteristic of the AOD-using adolescent needing residential treatment. The adolescent-specific group process should follow a progression that enables the adolescent to look at him- or herself in relation to and in conjunction with family, peer group, community, society, and world.

Some of the issues to focus on include:

- Self-concept
- AOD use and abuse
- Feelings
- Life traumas:
  - Sexual abuse
  - Physical abuse
  - Family violence
  - Family substance abuse
  - Poverty
  - Deaths of members of family
  - Losses
  - Family dysfunction
  - Cultural concerns
  - Spiritual concerns
  - Peer group concerns.

Troubled adolescents often report feeling lonely as a primary concern and yearn for inclusion and connection. Group therapy enables them to achieve these goals.

The goal of therapy should be to enable the adolescent to discuss intimacy—this means equal power and spontaneity in communication. Group therapy can be painful and intense, and expressed feelings include pain, agony, rage, anger, loneliness, fear, horror, disgust, and self-hatred. When the adolescents are able to show these feelings, they develop a sense of connectedness which serves to build the hopefulness needed for the adolescent to become desirous and capable of change.

Family Groups

Positive family involvement is the best single indicator for adolescent success in residential treatment. The willingness and ability of the family or significant others to support and take part in treatment and support abstinence from AODs must be encouraged. Improved family functioning is a primary goal when engaging families in the AOD abuse treatment process.

Involving the family in the adolescent's treatment is vital for many reasons. Most adolescents who need services from a residential setting come from families where issues of criminality, violence, sexual violence, mental illness, and substance abuse are causes of the adolescent's acting-out behavior. Therefore, it is worthwhile to engage the family in the treatment process. The adolescent with no identifiable family or with a family that refuses to be involved in the treatment process should not be denied access to services. In such circumstances, an attempt should be made to find someone who can be viewed as a family member. The concept of

family should be broadly defined to include the nuclear family, the extended family, mentors, significant others, or anyone who will assist the staff in guiding the adolescent through treatment.

In the case of the adolescent who has no family members willing to take part in treatment, it may be necessary to identify one person the adolescent trusts. Very often, this will be the person who brought the teenager to treatment. It is important that the program staff help to ensure a continuity in this relationship. The involvement of these persons can help the adolescent to make positive connections and become motivated to remain clean and sober.

Another major consideration needing to be faced and addressed in dealing with adolescents is that they are most often not motivated to get clean and sober. They often do not recognize that they are in trouble and may see themselves as invincible. Rarely have they hit "rock bottom," and they have not usually suffered dire consequences of substance use and abuse. Therefore, the family needs to be the motivator until motivation becomes internal. Internal motivation may come with maturity.

The prevailing attitude with teenagers in trouble with substance abuse is, "I have years to go before I stop (using or drinking)." Often, the major problem contributing to the development of AOD abuse lies in the family. If the family can form a partnership with treatment staff and be encouraged to be part of the solution rather than just part of the problem, then a good staff-parent-adolescent partnership can be developed.

A comprehensive adolescent program should therefore develop a family program. The family program, if possible, should be a requirement of the residential treatment program. The lack of a family's involvement, however, should not preclude the adolescent from obtaining treatment.

Just like the AOD-abusing teenagers, family members need orientation, group therapy, and didactic educational sessions. Multifamily groups with and without the clients can be utilized, as well as a planned series of lectures. Families also need individual sessions, with and without the client present. Family involvement and treatment are so important, in fact, that many residential inpatient programs for adolescents actually have become family programs. The main purpose of the family treatment program is to empower parents to take on a parenting role. The family involvement should be comprehensive in nature and should enable parents to receive individual, group, and family therapy. Ideally, family members will be involved in all phases of treatment, continuing all the way through continuing care.

Ideally, there should be an opportunity for parents to be involved in intensive treatment, with a recognition that aforementioned family issues should be addressed on an in-depth basis. The rationale for intensive family involvement is that it is impossible to treat adolescents adequately in a vacuum. It is important to look at the family as a system and to take a systems approach to the problem. When one member of the family system has a problem, all members are affected.

Didactic and Educational Groups

These groups provide an opportunity for adolescents to learn about the effects of AODs, and in a nonthreatening way, allow them to make their own self-diagnosis, leading to improved motivation for self-care. They also provide the chance for learning about other issues. Didactic groups provide the information and experiences which will allow adolescents to accumulate the knowledge and insight that they will use in organizing and planning for their future. Didactic content must be adjusted to the developmental level of the adolescent.

Topics to be addressed in didactic groups might include:

- The disease concept. A major function of the educational program is to teach adolescents about the disease concept of AOD addiction. This concept should be presented, even if the adolescent is not yet able to make a commitment to abstinence.
- Medical aspects of AOD abuse.
- The progression of addiction, including signs and symptoms.
- Effects of the intergenerational nature of the addictions.
- Effects of chemical dependency on the family.
- Discussion of support systems—Al-Anon, Alateen, etc.
- Rationale for the use of support systems.
- Role of the sponsor in the life of the adolescent.
- Adolescent-geared relapse prevention.
- Codependency.
- Stress management.
- Basic human sexuality (possibly in separate male and female heterosexual, homosexual, and bisexual groups).
- Contraception.
- Male and female sexual abuse:
  - Explanation of dissociative responses
  - Post-traumatic stress disorder (in terms of the behavior that led the adolescent into treatment)
  - The sex offender—including the definition of sexual assault, prevention of sexual assault, the sexual assault cycle, the rape trauma cycle, common reactions to sexual assault, and common feelings about sexual abuse.
- HIV and AIDS education.
- Denial and other defenses; discussion of defense mechanisms.
- Basic hygiene.
- Spirituality.
- Basic living skills.
- Journal writing, bibliotherapy.
- Values clarification as regards these didactic issues.
- Positive peer relationships.

Family Didactic Sessions

Family didactic sessions should closely follow many of the same issues and topics that are addressed in the adolescents' didactic groups. These groups might include education and discussions on:

- Essentials of the program in which the adolescent is receiving treatment
- Family boundaries
- The healthy family
- Sexual abuse education and prevention
- Adolescent sexuality—heterosexual and homosexual
- Adolescent alcoholism and drug addiction
- Intergenerational nature of alcoholism
- Intergenerational nature of sexual abuse
- The role of the parent in the adolescent's treatment
- The role of the parent of an AOD abusing adolescent
- Understanding the role of support systems
- Understanding AA, NA, Al-Anon, Alateen
- General communication skills
- Understanding sponsor issues
- Improving adult-adolescent communication skills
- Different types of support group meetings
- Addressing codependency issues
- Education in the developmental stages of adolescence
- Adolescent behavioral cycles.

School Program

The consensus is that all adolescents should be able to continue their education, staying on a par with their peer group and ensuring that transition to school from the program can occur with the least disruption and the greatest possible ease. Most States mandate that adolescents attend school while in treatment. The educational component should include traditional academic work, vocational training, affective education, and special education, when required. Adolescents in treatment will very often enter the educational experience with existing deficits which must be assessed and remedied.

Vocational Program

Attention can be given to vocational needs. Vocational education opportunities should be available where necessary. Vocational choices should be part of comprehensive didactic education.

Support and 12-Step Meetings

The rationale for attendance at these meetings is to provide the opportunity for adolescents to identify themselves as having the disease of AOD addictions, and to enable them to identify with other people who have the same disease. Participation in such meetings gives adolescents the opportunity to learn and understand that there is life in recovery, gives them a firm grounding, and serves as a lifetime support system.

Attendance at meetings should be a regular part of residential programming, and adolescents should attend as a group with staff support and should be able to process the meeting on return to the facility.

It is important to make sure that the adolescents learn about and understand the whole range of support meetings, from Alcoholics Anonymous, Narcotics Anonymous, Al-Anon, and Alateen to Adult Children of Alcoholics. Exposure to meetings that are age-, gender-, and culturally appropriate for adolescents is important. Staff should help adolescents participate in meetings by assisting them with issues of self-consciousness.

These meetings can become a valuable asset to outpatient care for the teenager beginning to stabilize. The meetings offer a self-support group that will always be available after treatment is finished. At NA and AA meetings, adolescents will find role models for them to follow and new friends who are learning to enjoy AOD-free lives. They will also find people celebrating sober living, and a place to learn how to solve or live with the ongoing problems of life.

Recreational Program

Recreation is an important part of any treatment protocol. Two kinds of recreation are needed—diversionary and therapeutic. Art therapy and journal writing are creative outlets which are also therapeutic in nature. Recreation should be thought of as a creative outlet, designed to give many new choices to the adolescent. It should be designed to break the intensity of therapy and to enable adolescents to develop a repertoire of skills, thereby expanding their world.

Recreation is also important because it can help adolescents to deal with excess energy. If adolescents are feeling anxious or angry, they must have nonviolent alternatives available to cope with their emotions. Expending excess energy in healthy ways is an important skill. Recreation also helps to provide balance in a therapeutic setting. In fact, a major rationale for including recreation in the residential program is that adolescents will need balance in their lives in the future; they have not had it in the past and often need it.

It is important for adolescents to explore alternative ways to have fun without the use of AODs. Outings can vary among such activities as sports, museum visits, boat rides, and sober dances. Staff can attend and provide clients with role-modeling by participating in the activities.

Transition, Continuing Care, and Followup

Continuing care should be part of the continuum of any adolescent treatment. It should be comprehensive. Continuing care should provide for orderly transition from

residence to community. Adolescents who have developed trust and thereby responded to treatment do best when continuity and familiarity with counselors is maintained. Activities should include:

- Continuing relapse education
- Continuing family involvement
- Group and individual therapy
- Contract making and compliance
- Structure
- Clear expectations
- Plans for treating relapse
- Contact with a primary therapist
- Encouraging adherence to support systems
- Use of sponsorship and mentoring program
- Discharge planning
- Followup procedures
- Regular evaluation.

The program-to-community transition should be built into the treatment program. Program structure should allow for a progression through various stages, from initially rigid to a more flexible structure. As treatment progresses and to the limits allowed by third-party payers, the adolescent should have passes to go home regularly and for increasingly longer periods of time. Programs should help adolescents prepare for transition as part of their relapse prevention efforts. Relapse prevention should be addressed early in the therapeutic process and continued as a significant issue throughout inpatient and outpatient treatment. Ideally, parents should be taught a supportive role and should be made aware of how critical the period of transition is in their child's recovery process.

Programs must also be prepared to address possible behaviors which may arise as discharge nears. The adolescent who actively tries to avoid treatment may be the same adolescent who may sabotage his or her own progress in order to stay longer. This is another reason why family involvement and transitional planning are important. If the family can become part of the planning, the adolescent is likely to be less fearful about the future. When a program becomes the only parent figure and a lifeline, the prognosis for the adolescent is poor. Programs must not view themselves as families, with residents as sisters or brothers. The reality is that adolescents must always be preparing to return to their own family and to life's realities.

Another consideration related to transitional factors has to do with the philosophical approach of the particular milieu. Adolescents will often do better at release when they have had a positive treatment experience and have an investment in the treatment program and its philosophy. Adolescents are more likely to have a successful outcome when they feel a sense of pride and ownership in their program.

In preparation for eventual discharge, adolescents should be exposed to people from the community throughout treatment and if possible should participate in community events. Adolescent participation within the community often represents a valuable resource in the public relations aspects of programs. It is healing for some adolescents to tell of their experience and to have a positive influence on others. They often relish the opportunity and report that these activities greatly enhance their self-concepts. Also, adolescents are quite capable and frequently enthusiastic about conducting the orientation of prospective clients and helping new clients to adjust to the therapeutic environment. These efforts are designed to enhance self-concepts and help the adolescent have pride in the program. These community and program responsibilities are all in preparation for the eventual transition to home and continuing care.

Confidentiality and Communication with Referring Agency or Individual

Every program must evolve written guidelines pertaining to the maintenance of confidentiality. Such guidelines must address the competing tensions between a desire to share information with referring and consulting agencies and individuals, and the need to preserve the trust of the adolescent and protect privacy. Such guidelines must adhere to applicable Federal and local regulations while reflecting the individual philosophy of the program. All staff should be familiar with and committed to these guidelines.

Within the limits of confidentiality, there needs to be continued communication with referring agencies and individuals so that they remain knowledgeable about the problems, progress, and plans pertinent to the adolescent.

Legal Services

Legal entanglements are quite common among adolescents who require inpatient treatment, and provisions to address such problems must be available within the program. Coordination with the juvenile justice system will be necessary. (See chapter on treatment in the juvenile justice setting.)

Program Evaluation

Please see chapter 2. The discussion provided there of program evaluation in outpatient programs applies equally well to inpatient treatment.

Monitoring Client Progress

Beyond evaluating client progress as necessary for program evaluation is the assessment of the progress of an individual client as required to modify his or her treatment plan. Each adolescent should be monitored in every phase of program activity. In addition to drug screening, the client has to be monitored in terms of weekly progress in group therapy, family therapy, individual therapy, educational program, recreation, and support group attendance and participation. This monitoring must

make reference to the treatment plan; it will lead to adaptations of, changes in, and additions to the treatment plan. It should be done in conjunction with the adolescent. Monitoring is most useful when done with input from the entire treatment team.

Quality Assurance

Quality assurance is critical to program efficiency and is provided through clear, effective policies, consistent supervision, attention to the administrative and clinical aspects of the program, a focus on accountability, and accurate record keeping. Performance audits should be conducted. Information should be shared openly among staff and used for planning.

Client satisfaction must always be assessed. When a client leaves the program, an exit interview should be conducted, and the adolescent should be asked for recommendations for program improvement.

Definition of Success

In treatment programs for adults, the primary definition of success is the client's maintenance of abstinence. Attention needs to be directed, however, to the questionable suitability of abstinence as the sole definition of treatment success in adolescent inpatient treatment programs, as well as other types of programs serving young people.

If standard measures of success are utilized—that is, abstinence is a primary criterion—then existing data would suggest that current methods of treating adolescents are not meeting their needs. Various treatment indicators place the average success rate of adolescents between 20 and 25 percent. The comparable success rates for adults, using the same criteria, are in the range of 60 to 70 percent. As a result, adolescent treatment programs seem to be failing.

Rather than assuming failure, we recommend that treatment programs revise their evaluative approach to more closely reflect the developmental realities of the adolescent client. Strong consideration should be given to changing the way in which adolescent treatment success is defined and measured. Whereas adolescent life success cannot be accurately determined using the same criteria used for adults—completion of career training, job status, ability to care for the family, etc.—neither should adolescents be expected to adhere to the same template for treatment success as adults.

It is suggested that a system for measuring success with adolescents be considered in which abstinence from mood-altering substances is not the only criterion. Abstinence must always remain as an ultimate goal of recovery. However, a multitiered system is suggested, in which emphasis would be given to relative improvement in various life skill areas. Measurement of treatment success should be an individualized process, based on the adolescent's relative level of functioning upon entering the treatment continuum. Paramount in this multitiered model for measuring adolescent treatment outcomes will be the combination of abstinence from mood-altering substances over time. Newer indicators of success in various life skill functions must be quantified and credited.

Various instruments currently exist which utilize a multitiered scale to determine the degree of success being experienced by an adolescent who is under treatment or has been discharged. These instruments and similar methodologies can be applied to the measurement of the success of adolescents and the programs that care for them.

Client Issues

It is important for treatment professionals working with AOD-abusing adolescents to be sensitive to the issues of adolescent development that distinguish these clients from adult clients. The following are important considerations.

Age Span

The age range of adolescents has not been clearly defined but begins approximately at age 11 and extends through age 18 to 21. In this span of years, there are wide developmental differences. Consequently, the inpatient treatment program must offer services that are appropriate to adolescents at different maturational levels. The maturational level of the adolescent may be more relevant than chronological age in determining what types of interventions are needed. For example, a 13-year-old working as a prostitute on the street will clearly need different interventions than a 13-year-old who has remained at home and in school.

Ideally, adolescents in treatment should be divided into three groups: early, middle, and late adolescence. Separate programs could be developed to focus on the very specific needs of each group.

Geographic Proximity of The Program to Clients

Living close to or far from the program will be a strong determinant of compliance, particularly as this relates to the participation of family in the therapeutic process.

The program staff must recognize the special needs of families who live far from treatment sources. Too great a distance precludes them from participation in treatment. An adolescent housed in an inpatient program that is distant from his or her home will require special attention to continuing care needs subsequent to discharge.

Length of Stay

The program should establish average lengths of stay for the kinds of treatment they are providing, allowing, however, for variability in the rate of progress for differing

young people. In addition, adolescents may need to leave treatment when they have reached a therapeutic plateau, returning when they are ready for additional treatment.

Staff Issues

Staffing for an Inpatient Treatment Program

Staffing patterns must be based upon the range and intensity of services being offered. The following disciplines should be represented, either as full- or part-time staff or as consultants, within an intensive inpatient program.

- Psychiatrists or addictionologists
- Pediatricians, internists, or family practitioners
- Nurses
- Certified AOD abuse counselors
- Family therapists
- Psychologists trained in evaluation and intervention
- Educators/teachers
- Social workers
- Recreational or expressive therapists
- Outreach or home intervention workers
- Resident managers.

The size and nature of programs determine which personnel must be on site at all times, which disciplines might be represented on a periodic basis, and which specialists may function on an ad hoc or on-call basis. However, an essential element is a treatment team that provides the continuity and consistency that build safety and trust into the setting. Members of the treatment team must be able to provide continuity and structure within the program. The core staff play essential roles in intake assessment, case management, AOD abuse treatment, continuing care, and the presentation of specialized educational topics (such as HIV, sexually transmitted diseases (STDs), and AOD abuse).

Programs should have well-defined personnel policies that detail prerequisites for each position, a period of probation, an ongoing process of staff evaluation, and an enforceable code of conduct for employees.

Staff Skill Areas

Because of the complexities of the AOD-using adolescent, staff who work with this population can best contribute to effective care if they have training and skills in the following areas:

- Group dynamics and therapy
- Family therapy
- Physical abuse
- Depression and suicide
- Referral and community resources
- Management of oppositional and violent behaviors
- Cognitive impairments (learning disabilities, attention deficits, organic mental disorders)
- Legal issues (custody, juvenile justice issues)
- Treatment planning and documentation.

Level of Staff Training

Staff who work with AOD-abusing adolescents need to have training in:

- Addiction and treatment
- Family dynamics
- Growth and development
- Sexuality
- Sexual abuse
- Mental health issues: depression, anxiety, and other disorders
- Cultural competence
- Recreational activities.

In addition, inhouse training must be provided which addresses the particular program. Staff must be trained in crisis management, operation of the residence, and coordination of the complexities of the program.

There needs to be an orientation for all new employees. All staff—whether full- or part-time—must be committed to the same philosophy of the treatment program.

Certification and Credentialing of Staff

Requirements for the certification of AOD abuse counselors differ among the States. All staff should be encouraged to become certified in their specialty, such as a nurse certified in chemical dependency, or a physician who is a board-certified addictionologist. Records documenting these credentials should be maintained. Staff should be supported in obtaining inservice and continuing education to enhance their clinical competency in their specialty. Each State should have credentialing requirements, and program licensure should be based upon a predetermined ratio of certified staff.

Utilization of Recovering People as Staff

Treatment programs frequently utilize recovering alcoholics and other drug abusers as staff. These individuals offer unique hope, role modeling, and special insight into dependency and recovery. When recovering individuals are employed, it is important that they have the expertise and training that are required of other staff. There must be clear evidence of recovery and abstinence, usually as represented by 2 to 5 years of sobriety and freedom from drug use. When hiring staff in recovery, the clinical supervisor should be sensitive to recovery issues and staff should be sensitive to their own recovery issues. For example, it is important that the recovering person be able to avoid overidentification with the youth and that personal issues not interfere with their therapeutic effectiveness. Program staff directors should be aware of the ratio of recovering alcoholics and drug abusers on staff to those who are not recovering. It is to the benefit of the adolescents to have exposure to staff with varied backgrounds.

Cultural Diversity of Staff

It is also important to have people of various cultural backgrounds on the staff. When a program is in a location where there is a predominance of a specific ethnic

group, the staffing should reflect that predominance. While cultural sensitivity is important, the assessment of the individual should be the driving force underlying the design of treatment for each client. Programs should not be designed solely on the basis of cultural considerations but rather must treat the presenting problem. All programs should be designed to meet individual needs, and it is in this context that cultural considerations should be applied.

If a significant part of the client population is non-English-speaking, at least one member of the staff should be bilingual and bicultural. Cultural diversity is a regional issue that needs to be addressed by each program through the utilization of community resources.

Chapter 5—Adolescent AOD Abuse Treatment in the Juvenile Justice System

Most youths in the juvenile justice (JJ) system abuse alcohol or other drugs (AODs). This AOD abuse exacerbates other problems in their lives and makes any effort to rehabilitate them more difficult. Yet AOD-abusing juveniles in the justice system rarely receive appropriate treatment. This protocol details a number of proposed changes in the JJ process, philosophy, and organizational structure that will enable AOD-abusing juveniles to receive the necessary treatment.

The Juvenile Justice Population

The number of youths in the U.S. involved in the JJ system's various residential components exceeds 100,000 on any given day. There are also more than 300,000 juveniles on probation and in continuing care programs.

Most of the juveniles in the justice system are male and between 15 and 17 years of age. Most are from urban settings (Dembo et al., 1988; Simonson and Gordon, 1979). About 45 percent are black, 40 percent are white, and 15 percent represent other minority groups. Adolescents in the JJ system are more likely than juveniles in the general population to use AODs (Colorado Division of Youth Services, 1985; Dembo et al., 1988). Various studies have indicated that between 70 and 95 percent of these juveniles have used AODs (Colorado Division of Youth Services, 1985; Dembo et al., 1988).

Many juveniles who enter the justice system also have complex problems related to psychological disturbance or physical and sexual abuse (Colorado Division of Youth Services, 1985; Dembo et al., 1988; DuPont, 1989; Singer et al., 1989). The more extensive the youth's involvement with drugs, the greater the likelihood that the youth will have a history of such problems. Thirty-five percent of a sample of juveniles in a Florida detention center were found to have been sexually abused (Dembo et al., 1988). In a study of juveniles admitted to a Colorado detention center, 90 percent of the girls and 58 percent of the boys had been sexually abused (Colorado Division of Youth Services, 1985). Seventy percent of the latter sample reported symptoms of depression and anxiety. About 50 percent reported suicidal thoughts, and about 25 percent had attempted suicide.

The unique health and educational needs of these juveniles are rarely met within existing treatment parameters. They may experience health problems associated with trauma, sexually transmitted diseases, or prostitution. They may also have problems in school, which leaves them "behind" academically.

Youths in the JJ system often come from dysfunctional or disintegrated families. Many come from families in which the parents are divorced or there is only one parent. Some may have only an inconsistent adult parental figure in their lives. In addition, the family members of incarcerated youth themselves often have a history of crime, mental health problems, or incarceration.

AOD abuse may be a multigenerational problem within these families. As a result, family members of incarcerated juveniles may support these youths' denial of substance abuse or otherwise enable them to abuse AODs. The families of incarcerated, substance-abusing youth also need support to break the cycle of substance abuse and related problems.

It would be a mistake, however, to assume that all families of youth in the JJ system are disintegrated or dysfunctional. Approaches to treatment should capitalize on the competence and strengths of the youths and their families. One advantage of working with this group of young people is that they may have experienced sufficient pain to be more open to treatment than other substance-abusing youth. Evaluation and referral for this population should proceed as for any youth with a substance-abuse problem—but with recognition of the special problems that complicate treatment for this group.

Overview of the Juvenile Justice System Organization

The JJ system is composed of several diverse agencies that together carry out society's response to juvenile delinquency. Agencies at

the municipal, county, and State levels are involved. Variations in the States' approaches to JJ are reflected in the organizational structure of each State's JJ system. JJ services may be under the purview of a combination of agencies: a department of social services, child welfare, mental health, health services, children and family services, adult corrections, or a separate, independent agency responsible for all youth services.

The States' JJ systems share five basic components:

- Law enforcement agencies are generally the first to come in contact with juveniles who enter the system and, thus, make most of the initial referrals to other JJ agencies.
- Residential juvenile detention facilities house juveniles who are accused of having committed a delinquent act, are a danger to their own or others' safety, or are awaiting adjudication and disposition and are unlikely to appear in court if not held in custody. These facilities may be high-security or low-security.
- Juvenile court or family court is the judicial body that has jurisdiction over a juvenile charged with a delinquency.
- The corrections agency is the agency responsible for the custody, care, and treatment of the juvenile and for his or her reintegration into the community.
- Community agencies administer alternative rehabilitation for juveniles who do not need to be placed in an institutional setting.

Process

Whatever the variations among State approaches to JJ, the JJ process comprises six phases: intake, social investigation, fact-finding hearing, adjudication, disposition, and continuing care. In most jurisdictions, the administration of court orders from intake through disposition is delegated to the local probation department. However, once the juvenile is committed to the State JJ system, most jurisdictions delegate the administration of the juvenile's case to a caseworker, who manages the case through continuing care.

Intake

The juvenile's first contact with the JJ system is likely to occur when the police respond to a complaint filed against the juvenile. After a juvenile has been taken into custody, a formal intake process begins. An intake officer in the local probation department decides whether or not to file charges. The officer also determines whether the juvenile should be released to parental custody, placed on informal probation, or detained in a juvenile detention facility. Many juveniles are counseled by the intake officer and referred to community agencies without being referred to juvenile court.

Social Investigation

Once the intake officer files a petition for judicial intervention, a probation officer conducts a social investigation for the juvenile court. This investigation examines the juvenile's family, education, and history of delinquency, among other information on his or her background. In some cases, this investigation may be supplemented by reports from court-appointed social workers or a special child advocate.

Fact-Finding Hearing

Any juvenile detained in a juvenile detention facility must appear before a judge for a fact-finding hearing. The original complaint and the results of the social investigation form the basis for this hearing, in which the judge hears all the facts concerning the juvenile's case. This hearing is comparable to a trial in the criminal justice system.

Adjudication

On the basis of the fact-finding hearing, the court adjudicates the case—that is, determines whether or not the juvenile is a delinquent. The court may transfer the case into adult court because of the seriousness of the offense or other aggravating circumstances. If the court determines that the juvenile is not a delinquent, the case is dismissed. In most cases the judge's decision is strongly influenced by the recommendations of the intake probation officer.

Disposition

Once the judge has ruled that a juvenile is delinquent, a hearing is held at which the judge makes a decision regarding the disposition of the case. The disposition can include release with a warning, community supervision, or commitment to a juvenile training school or specialized treatment facility.

In most jurisdictions, juveniles who receive long-term placements at disposition are sent to State-run juvenile training schools (the most restrictive placement), juvenile camps, or community residential facilities (the least restrictive placement). Some States also place juveniles in other specialized programs or treatment facilities. However, in recent years courts have increasingly placed youths in detention facilities at disposition.

Continuing Care

In most jurisdictions, after the juvenile has successfully complied with the court's recommendations, he or she is released to the supervision of aftercare service providers. Aftercare may involve prescribed participation in counseling, school attendance, regular contact with a counselor, or other structured activities designed to enable the juvenile to live in a socially acceptable manner.

Obstacles to Treatment

JJ programs generally do not provide juveniles with comprehensive assessment and treatment planning for AOD abuse. Very few jurisdictions provide appropriate treatment for substance abuse to juveniles in their custody. Most juvenile programs that do report providing substance abuse treatment services merely provide access to Alcoholics Anonymous, Narcotics Anonymous, or drug testing (urine analysis). In some programs, substance abuse treatment counselors conduct individual and group counseling sessions, but even these facilities fail to conduct comprehensive assessments of juveniles' treatment needs, or to plan and carry out individualized treatment. When juveniles receive treatment, there are often delays.

The poor quality of treatment in JJ facilities is due to a number of factors, including fiscal constraints, the lack of a guiding philosophy for JJ, and a lack of coordination among the various personnel and agencies offering juvenile services.

Fiscal Constraints

The fiscal resources of JJ facilities have not kept pace with the increase in the number of youths in the system; as a result, programs generally operate at the minimum required levels. Fiscal constraints play a role in most of the obstacles to the provision of adequate treatment.

While there are many private substance abuse service providers, these services are costly, and few adolescents involved with the JJ system can afford them. Few provide services to individuals relying on Medicaid, and not all accept JJ offenders as clients.

Lack of a Guiding Philosophy

In most States, the JJ system is intended to function under the *parens patriae* principle; that is, the State is to act as the parent on behalf of the juvenile. This principle requires that the operations of the JJ system be significantly different from the operations of the adult criminal justice system. However, in no State system is the *parens patriae* principle consistently or universally applied.

The nominal goal of most JJ systems is to reintegrate the juvenile into the community. To attain this goal, some facilities emphasize punishment; others attempt to emphasize rehabilitation, correction, mental health treatment, social skill training, education, or other services. Whatever their intentions, most JJ facilities are focused on security. The responsibility of protecting the community by preventing the youth from escaping from custody generally overshadows all other responsibilities, including the care and treatment of the juvenile. Furthermore, many JJ personnel believe punishment should be the primary focus of detention, and that treatment is antithetical to the requirements of punishment and supervision.

Inadequate Coordination Of Services

Many adolescents in the care of JJ are also in the care of child welfare or protective services. One youth may have a number of different caseworkers from a variety of juvenile services. These caseworkers may not communicate about the young client they have in common and consequently do not develop coordinated interventions for the adolescent.

Within the JJ system, treatment and supervisory staff have little opportunity for direct interaction, and they are not adequately trained regarding the requirements of each other's work. Nor are they trained to coordinate their efforts. As a result, JJ personnel are not sufficiently aware of how their supervision of the adolescent affects the success of treatment. They often have misconceptions of what constitutes good AOD treatment.

Providers of treatment and other rehabilitative services often do not adequately understand the JJ process and the requirements dictated by the need for security. This lack of communication and understanding makes it difficult for treatment providers to have an impact on the kind of treatment offered to the juvenile. Coordination between AOD treatment providers and the traditional system of health and mental health services is also inadequate in many jurisdictions. Many providers are certified through courses outside of the traditional health and mental health training programs (Fox et al., 1991).

The lack of coordination among providers of JJ and other juvenile services is evident in the adjudication of JJ cases. While multiple social service agencies may possess information about an adolescent's problems and treatment needs, judges are seldom supplied with this information when they initially rule on cases.

Recommendations

While the JJ system presents many obstacles to effective treatment for AOD abuse, the system has the capacity to mandate treatment for juveniles who otherwise might not have access to treatment. The juvenile and family court system has the power to order the provision of treatment and other public social services for a juvenile. Payment for services can often be mandated by the courts. The power of the judicial system and related agencies should be used to attain the best possible services for the youth and the family. Several recommendations for enhancing the quality of treatment provided in the judicial system are made below.

Establish a Guiding Principle: The Youth's Right to Treatment

To collaborate effectively, corrections and treatment personnel must be trained to share a consistent, articulated philosophy. All corrections activities should be guided by the principle that the youth has a right to treatment. The goal of providing treatment should be considered as important as the goals of protecting the community, making the juvenile accountable for his or her actions, and fostering the juvenile's development. Indeed, the provision of treatment will support all of these other goals.

To reinforce this principle, the system of rewards within the JJ system should be modified so that personnel are rewarded for monitoring AOD problems and behaving in ways that will reinforce the youth's treatment. Training for JJ personnel should also reinforce this principle (see section below on training).

Coordinate All Juvenile Services

Coordination of services is necessary to provide consistent, cost-effective, appropriate treatment. The efforts of all groups that influence the adolescent's experience in the JJ system should be coordinated. These groups include all components of the JJ system including the public defender's office, the prosecutor, and agencies providing educational and social services (such as the child welfare board, child protective services, AOD treatment personnel, medical personnel, and the school district). To achieve continual interagency communication, two mechanisms should be developed—the case management system and the treatment advisory group.

Each juvenile should be assigned a long-term case manager to serve as the juvenile's advocate. While some jurisdictions currently use case managers, these individuals manage as many as 40 cases at a time. It would be preferable to assign fewer juveniles to them and to make case managers serve as long-term advocates for youths. The case manager should be a paid individual trained to serve as an advocate, and should be from an organization outside the JJ system. The case manager's role should be distinct from that of a parole officer, who acts on behalf of the courts and is involved in the adolescent's case only through continuing care.

A treatment advisory group representing all key agencies involved with the youth should meet with the case manager to review the youth's case at intake to formulate treatment recommendations for the judge. Once the judge has ruled on a case, the case manager should monitor the youth's case and coordinate services to meet the youth's basic needs. These may include treatment, education, vocational assistance, food, and clothing.

Early in the youth's treatment, the case manager should bring members of the treatment advisory group together to evaluate outcomes. On the basis of those outcomes, the group can make recommendations for modifications in the youth's treatment program.

At all phases in the JJ process, the case manager should communicate with all juvenile services involved with the youth on an ongoing basis to facilitate the coordination of the care they are providing. The case manager should also maintain a record of information about the youth, the youth's experience in the JJ system, and the treatment he or she has received. After formal continuing care has ended, the case manager would maintain contact with the adolescent and members of the treatment team to coordinate services until the youth reaches adulthood.

The involvement of multiple parties and agencies at each stage of the treatment planning process can make the process more accountable and open. The case manager and interagency treatment advisory group can help to keep the focus on the best interests of the adolescent, rather than on the interests of the agency most directly involved in a given aspect of treatment. When multiple agencies collaborate, adolescents are likely to be successfully treated, rather than merely "processed." Public defenders and judges will then be more likely to give careful consideration to the recommendations of the treatment advisory group.

This proposed process is in keeping with innovations that have been made in the Federal adult correctional system. The Federal system has shifted from relying on probation officers for the management of casework to making use of a community resource management team. Under this model, the offender's reintegration into society is supported with the use of existing community resources. The team involved is generally multidisciplinary; each member specializes in a different aspect of the client's needs—for example, needs for employment, AOD treatment, or counseling (Simonson, 1991).

Provide Training to Integrate Services

Treatment personnel and JJ personnel need training to understand how they can work together in the youth's best interest. This training should be grounded in the philosophy that the youth has a right to treatment for AOD abuse. Supervisory personnel in both treatment and JJ need training in building relationships with other personnel and agencies involved with the youth.

Staff at treatment centers that take referrals from JJ need training regarding the function of the JJ system. They should also understand how custodial concerns (such as obtaining the youth's cooperation and how to ensure his or her safety) affect treatment.

Corrections personnel at all levels need training to understand how their work can support treatment for adolescents with AOD problems. Corrections staff should be trained to collaborate with contractual treatment personnel. JJ personnel at many levels would benefit from basic training in treatment modalities. Directors of correctional facilities need this training to be able to evaluate services provided by outside contractors. Judges need this information to be able to order appropriate treatment and to become advocates for the provision of additional treatment facilities.

To make appropriate recommendations to judges, probation officers need to understand the nature of AOD problems and to be aware of available treatment options. To monitor the progress of the adolescents with AOD problems, they need knowledge of adolescent development, family dynamics, cultural differences among their clients, and the signs of adolescent AOD use. They also need communication skills to be able to gather information about their cases and to reduce resistance to treatment from the youth and the family. Probation officers should also be trained to interact with adolescents in ways that reinforce treatment. (For example, they should refrain from smoking in front of the adolescents they monitor.)

Case managers need similar knowledge to monitor their cases and to advocate appropriate treatment. In addition, they need the skills to coordinate communications among all agencies working with the juvenile.

Make Use of Contractual Services

Corrections facilities should foster relationships with treatment providers in their communities who offer an array of treatment services. At the fact-finding assessment and thereafter, services should be provided by these outside organizations, working within the policies and procedures of the institution. The private sector has the potential to be very innovative and efficient because it is able to be more flexible than the government in the use of personnel and resources (Taylor, 1992). Another advantage of contracting out treatment is that when a youth is released into the community, he or she will already have a relationship with an outside treatment program.

Involve the Community

While the case manager should have formal responsibility for serving as the youth's advocate, individuals from religious organizations, philanthropic groups, and voluntary organizations can serve as additional advocates. Voluntary organizations can develop advocate services in communities to monitor the JJ system's provision of treatment services to juveniles. When a youth receives a punishment that would undermine his or her treatment, community representatives can encourage the correctional facility to revise the sanctions the youth receives. Community involvement can also enrich the activities available to incarcerated youth by providing recreational activities, mentoring, tutoring, and other programs.

Implementation

If all JJ personnel are trained to act in ways that support the youth's treatment, and if services are coordinated through a treatment advisory group and case manager, all phases of the JJ process will be more conducive to treatment. The remainder of this section details how each phase of the process would look if the above recommendations were followed.

Intake and Arrest

The role of intake should be redefined: information should be gathered not only to begin judicial proceedings, but also to begin providing comprehensive social services to the youth. Immediate assessment is necessary to inform early judiciary decisions. Immediate placement into treatment is important so that adolescents receive treatment while still in contact with the JJ system.

Each youth who is arrested should have a simple, initial screening (including a drug test) within 24 hours of arrest. The initial screening should also include the gathering of information concerning agencies with which the youth is involved, health problems, mental health issues, and AOD use. The assessment will be used not to support further sanctions against the youth, but to decide what treatment to recommend if the youth's case is to be adjudicated.

The initial screening should require about 15 minutes, including the drug test. While the screening instrument should be one that can be administered by people without advanced clinical training, some basic training in the use of the instrument will be necessary for police officers, who are generally the ones who bring youths into the JJ system.

Any youth who tests positive for AOD use or shows signs of having an AOD abuse problem should be referred for further assessment. The detailed assessment can be mandated by a judge if the youth does not want to participate.

Any youth who has an AOD problem should be assigned a case manager, even if the youth is to be released without detention. The case manager can connect the youth with appropriate agencies before release, and can follow up later to encourage the youth to contact the agencies.

Social Investigation

As part of the social investigation, a more detailed assessment should be conducted by a subgroup of the larger treatment advisory group before the larger group meets. In the detailed assessment, the subgroup should identify key issues involved in the youth's case,

including family issues, substance abuse problems, mental health issues, any history of physical abuse, educational issues, legal issues, and physical health problems. The subgroup should compile a record of past treatment experiences and a list of systems already assisting the youth or the family. Members of this team should be adequately and appropriately skilled in their respective areas. One member of this subgroup should possess clinical expertise.

Fact-Finding Hearing

In preparation for the fact-finding hearing, the treatment advisory group should meet to consider the results of the assessment by the subgroup. The treatment advisory group, in cooperation with the case manager, should prepare recommendations for integrating all services to be involved in the treatment of the youth's AOD problems and other serious problems. Because most youths in JJ have multiple problems, the treatment advisory group would likely recommend multiple, coordinated referrals. The probation officer should be given the results of the assessment; his or her acceptance of the recommendations for treatment would be necessary to convince the judge to order treatment.

Adjudication

Judges have the greatest control over treatment during adjudication. Maximal use should be made of judicial authority to mandate treatment at this early point in the judicial process. The detailed assessment conducted by the treatment advisory subgroup and its recommendations should be made available to the judge before the adjudicatory hearing. The treatment advisory groups should also recommend to the judge the most appropriate services.

In making its recommendations, the treatment advisory group should note whether the services are available in the community. The group should be aware of what settings are available in the community, so that feasible alternatives can be recommended to the judge if requested. The judge is able to order that the State deliver appropriate treatment. By basing treatment recommendations on what is optimal rather than what is available, the treatment advisory group will highlight deficiencies in current treatment options. In this way, the assessment process will be a catalyst for State funding of additional services.

Disposition and Dispositionary Alternatives

If all JJ personnel were trained in the guiding philosophy that the youth has a right to treatment, it would reverse the recent trend toward the long-term placement of juveniles in detention facilities. Juvenile detention facilities are designed to provide short-term care for juveniles awaiting adjudication or disposition, not to serve as dispositional alternatives. Juveniles placed in detention facilities at disposition are unlikely to receive the special programs necessary for treatment of AOD abuse or their reintegration into society. Guided by the goal of providing effective treatment, the judge will be more likely to place the juvenile in an alternative dispositionary setting.

All JJ staff should be trained in supervisory techniques that support the youth's treatment. Staff in all dispositionary settings should be able to draw upon consistently applied, graduated sanctions that make use of both positive reinforcement and appropriate negative reinforcement. Staff should observe the juvenile's behavior and note any indications of the progress of his or her treatment. They should share this information with the youth's case manager.

Alternatives to placing juvenile offenders in secure facilities have increased dramatically in recent years. The range of transitional programs that help to prepare youths to return to their communities has widened as well. With these developments, it is important for juvenile program administrators to be aware of the pros and the cons of each program and to place youths in the programs that will benefit them most. A number of approaches and types of settings are now being used. The many options make it possible to select the setting most conducive to a juvenile's treatment needs. Some of the available alternatives follow.

Intensive Community Supervision

Under intensive community supervision, youths remain in their community and must regularly report to an assigned probation counselor. This arrangement allows them to attend school and maintain family relationships with minimal interruption. The planned frequency of the required contacts with the probation counselor may vary from several times a day to twice a week; less than twice a week is not intensive supervision. Telephone contact alone is not enough, but telephone contact may supplement personal meetings.

Report Centers

As part of community supervision programs, report centers can be set up in accessible locations in the community such as schools and shopping centers. Juveniles report on a regular basis to these stations according to their case plan. Some centers provide education, recreation, or social services.

Day Treatment

Specialized day programs that include education and social services help juveniles to develop social skills. They also provide supervision and control in a familiar setting. In many day treatment programs, youths take classes in the morning, participate in a group

activity such as boating or sports in the afternoon, and return home at night.

Evening and Weekend Programs

Direct supervision and programming similar to day treatment are also offered during evening and weekend hours. Tutoring, recreation, employment, and treatment services can be provided to supplement a juvenile's regular educational or work programs. Like day treatment programs, they provide supervision in addition to education and social skills development.

Tracking

Tracking programs hire staff (usually part time) to monitor juveniles and to report their compliance with specific requirements regarding such areas as school attendance, participation in counseling, and job performance. Whether working with other service providers or independently, trackers report regularly to the agency that has jurisdiction over the juvenile.

Electronic Monitoring

Some youths are now released under the condition that they wear an electronic device that monitors their movements. The efficacy of such systems is debated by JJ professionals and technicians, but all agree that electronic monitoring alone is insufficient. In order to be successful, it must be part of a multifaceted effort.

Home Detention

Juveniles under home detention are supervised by their parents in their homes and are allowed to leave only to go to school or work. This type of treatment is well suited for youths who do not require institutional security but need adult supervision and structure. Home detention is generally a short-term plan used until a detailed, long-range plan is developed.

Home Tutoring

Supplementing regular educational programs with home tutoring helps to remedy juveniles' educational deficiencies, establishes contact with an adult role model, and provides supervision.

Mentor Tutoring

Providing a trained juvenile tutor for a troubled youth can be extremely beneficial. In addition to educational tutoring, a mentor can offer a juvenile advice, emotional support, and a respectful, caring relationship.

Work and Apprenticeship

Some local businesses provide jobs or apprenticeships for juvenile offenders, generally in conjunction with an educational program. Such programs instill a work ethic, a sense of responsibility, and a feeling of accomplishment. They also enhance community relations.

Restitution

Under court order, juveniles may be asked to try to rectify the damage they caused their victims. Restitution can be in cash or in services amounting to a specific dollar value. Restitution, which is most frequently ordered in property crimes, provides an alternative to locking up juveniles that reduces public costs while compensating victims.

Community Service

Some offenders are required to provide services that benefit the entire community, such as cleaning up parks or working in nursing homes. This is a form of restitution that allows juveniles to contribute routine but worthwhile services. Community service projects must be clearly identified, and the juveniles must be properly supervised.

Volunteer Programs

Volunteers are often available to tutor youths and to supervise work and recreational activities. They may provide an additional service—being a friend, role model, and listener. Volunteers, like regular employees, need training, specific job descriptions, and supervision.

Continuing Care

Juveniles need continued monitoring and services after their release from dispositionary programs to prevent them from engaging in new delinquent behaviors. The case manager should oversee the gradual phasing out of the dispositional program and its replacement with a continuing care program. The case manager also should make sure that the youth continues to be involved with contractual services and voluntary groups that provided treatment and emotional support to him or her in the dispositional setting. The case manager should coordinate continuing care services and monitor the youth's progress.

Continuing care services should provide adequate supervision, involve the juvenile in positive peer support groups and monitor his or her involvement, provide counseling to the youth's family, and provide educational and vocational counseling.

After the youth's contact with continuing care ends, the case manager should monitor the adolescent's progress until adulthood. Voluntary groups in the community can offer ongoing support to youths whose continuing care has ended; the case manager should maintain contact with any voluntary groups involved with the adolescent.

The Role of Policymakers

Community agencies that provide services to youth with AOD problems should urge policymakers to adopt a treatment-oriented conception of JJ. Agencies should be prepared to present evidence that

coordinating services in keeping with this philosophy would lower recidivism.

Every State needs a plan that identifies resources available for treating AOD-abusing youth. Multidisciplinary task forces coordinated by the Federal Government should provide technical assistance to support State planning for the provision of treatment. These task forces should comprise individuals knowledgeable about the systems involved in conducting treatment and corrections. In each community, treatment providers and corrections personnel should collaborate with these task forces to assess available resources and to document needs.

The Federal Government can further contribute to the development of effective treatment by surveying States regarding effective integration of treatment and JJ services.

Conclusion

It is imperative that our society provide resources for the treatment of children who are in the JJ system and have problems related to the use or abuse of AODs. These are our most needy young people. If treatment fails for adolescents once or twice, we cannot give up on them. Contact with the JJ system can be an opportunity for AOD-abusing youths to receive AOD treatment—positively altering the course of their lives.

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Chapter 6—Legal and Ethical Issues in The Treatment of Substance-Abusing Adolescents[1]

Introduction

Delivering health care to adolescents, especially for alcohol and other drug (AOD) use problems, requires providers to have multiple bases of knowledge. They must be skilled in the medical and psychosocial protocols or models of care that permit effective diagnosis, communication, and treatment. They must also be aware of the complex Federal regulations that govern and constrain the operations of AOD treatment programs.[2] Finally, they must consider the range of legal and ethical issues in the treatment of adolescents, in general, that have emerged over the last 2 decades and apply those in the specific context of care.

The concerns of practitioners who treat AOD-using adolescents are described in the first section of this chapter. The general rules governing consent to care and refusal of care are discussed under the name of informed consent or informed choice, while highlighting how these rules apply to adolescents. Confidentiality issues are depicted, as well as suggestions regarding the ways that State law may support or interfere with the provider's confidential relationship. Also, there is an examination of the ethical obligations of treatment professionals in a fee-for-service system in which compromise of confidentiality may be a necessary precondition for payment.

The second section of the chapter examines the particular contours of juvenile jails or detention centers, which affect the practice of medicine therein. Since 1976, when the United States Supreme Court ruled that inmates in prisons and jails have a constitutional right to health care while incarcerated,[3] correctional health care has developed into a separate subspecialty within medicine. Issues of the doctor-patient relationship, matters of confidentiality, and the appropriateness of the rules that govern consent and refusal of care are all somewhat different behind locked gates.

Some of the problems peculiar to delivering health care in a confined setting are described, as well as guidelines to ensure that the medical care offered is as close as possible to the community standard.

Legal and Ethical Issues in Diagnosis And Treatment[4]

Informed Consent

Adult persons who are "of sound mind"[5] have the right to consent to or refuse care, even if the result of that refusal is death. This principle, which the law calls self-determination and philosophers identify as autonomy, is the basis for individual choice of care, and is based on judicial opinions, State statutes, and the Constitution. In the last decades, every State has passed legislation that secures this right for decisionally capable adults.

A personal process of informed choice is only possible if the treatment professional is able to present the diagnosis, prognosis (chance for recovery), alternative possible treatments, the possible risks and benefits of those treatments, and the likely outcome if treatment is not undertaken.[6] Once these discussions have taken place, the client has the right to refuse, although the literature notes that a likely reason for patient refusal is the lack of clear communication between the provider and client.

Central to this decisionmaking schema or model is the concept of decisional capacity, sometimes referred to incorrectly as "competence," or, more properly, as "*de facto* competence." Informed consent is only meaningful if the individual has the ability to weigh the risks, benefits, and alternatives. The term "decisional capacity" is meant to distinguish this capacity from legal competence. Legal competence signifies a generic judgment by society of when a person legally becomes an adult and is regarded as able to make binding independent decisions. There is no requirement for a focused individual inquiry before a person becomes legally competent; legal competence generally occurs at the 18th birthday, although for some actions such as medical care or legal drinking, it may occur sooner or later.

Decisional capacity, on the other hand, requires an individual assessment of cognition or knowledge, the lack of psychiatric illness, and the adequacy of judgment. It is a clinical appraisal that physicians make regularly in determining whether or not their

patients can provide medically, ethically, and legally adequate informed consent, and is a judgment that is critical in the care of adolescents.

Informed Consent for Children

The rules governing consent to medical care for children and adolescents change as our notion of children and their capacities evolves, as new social needs emerge, and as the statutory and legislative framework shifts.

The basic rule is that parents have the right to consent to care on behalf of their children, but do not have coequal rights to refuse care. Under the child-protective laws that exist in every State, an attempt to refuse care that physicians deem necessary for the well-being of the child can amount to medical neglect; based on such a finding, courts regularly order care over the objections of parents.

The Social Context of Informed Consent

Social events have also changed the way we think about the rights of children and the obligations owed them. In 1965, it was still illegal in most States for individuals to use contraceptives. Needless to say, it was illegal for doctors to prescribe or for pharmacists to sell contraceptive devices. By contrast, an "AIDS Prevention Day" was held in Yankee Stadium in 1991 and free condoms were distributed. In the 25-year interim, society had witnessed Woodstock, flower children, the growth of drug use, the legalization of abortion, the sexual revolution, the decline of the public school system, the increase in teenage pregnancy, and the escalation of child poverty. These events all had an impact on the legal and ethical climate in which practitioners now care for AOD-using adolescents.

Adolescents and Health Care

Physicians, other health care providers, and health care institutions face complex ethical and legal considerations when providing health care to adolescents. On the one hand, the adolescent is still, at least in name, a child, and, in most States, requires the consent of a parent prior to the delivery of most health care. On the other hand, the adolescent possesses a set of independent rights in relation to drug and alcohol treatment, treatment for sexually transmitted diseases (STDs), abortion, and contraception. In many instances, granting these rights involves the assumption that the adolescent is the legally authorized consenter for care. Providers are often faced with situations in which parental consent is arguably required by law, but the ethical course of action dictates care without parental consent. In addition, there is the stark reality that, in the absence of parental consent, payment may be impossible to secure.

The general rule is that parents have the right to consent to care on behalf of their children but do not have coequal rights to refuse care. Any attempt by a parent to refuse care deemed necessary by physicians may and should be referred to the family court as a possible instance of medical neglect. If the court finds medical neglect, it will order treatment despite the parents' opposition. Under these rules, children whose parents are Jehovah's Witnesses are regularly provided blood transfusions over the objections of their parents, and children whose parents are Christian Scientists or members of faith-healing sects are provided with care. The problems of providing treatment over the objection of the parents become far more complicated, however, when the patient is an adolescent.

Many providers believe that by the age of 16 or 17, although they are technically still children in most jurisdictions, some adolescents have the maturity and judgment to select and adhere to a belief system. Those who hold this position might argue that maturity and the ability to function independently do not necessarily proceed on the fixed timetable of legal majority (age 18 in most cases), and that some children hold their beliefs with a depth and conviction that demands respect.

Providers are often faced with situations in which the adolescent agrees with the parent and wants to refuse the care; court orders sometimes reject the joint refusal of parent and adolescent. When parent and adolescent disagree, however, and the adolescent wants to refuse care, the proper role for the provider may become morally more complex, particularly if the outcome of the intervention is uncertain.

In an emergency, defined as an instance in which the delay in providing care may be health- or life-threatening, or in which the child is likely to experience pain or suffering that could be avoided or diminished, care should be provided even without parental approval.[7]

The Social Assumptions About Care of the Mature Minor and the Emancipated Minor

Parents have the legal right and responsibility to supervise their child's care; society assumes that the parents' decision will be based in a knowledge of and affection for the child, and will reflect a considered judgment regarding what is in the best interest of the child. The law reflects the perception that parents are the best advocates for, and protectors of, their child's well-being, and that a care provider, even a well-meaning and skilled physician, is still a stranger to the child and family.

The law also assumes that children, at least young children, do not have the maturity, skill, education, or wisdom to balance present pain against possible future benefit, and to choose the present

discomfort for the future-likely advantage. For example, small children will certainly not willingly undergo the discomfort of vaccination in order to experience the benefits of immunity. They cannot work out complex personal cost benefit analyses and weigh the risks and benefits that the process of informed consent requires. But having said that, it is immediately clear that many adolescents are capable of just such an evaluation. However, AOD-using adolescents are probably less capable than nonusing adolescents of good judgment. In the case of AOD-using adolescents, whatever maturity they have acquired will likely be outweighed by denial, guilt, and the lack of honest insight that drug use creates.

Many of the assumptions about children and parents are far from evident when the child enters adolescence. By common law tradition, and in some States by statute, two categories of adolescents can provide consent to care: the mature minor and the emancipated minor. Both of these categories vary according to State common law tradition and according to statute. Therefore, it is always best to find an expert in a particular jurisdiction to provide guidance on that State's law.

However, in general, a mature minor is one who, in the personal opinion of another person, is found to possess the adult knowledge and judgment necessary for making health care decisions, or, more importantly, the particular decision at issue. The emancipated minor is one who has joined the armed services, is married, is living apart from and financially independent of his or her parents, or is otherwise demonstrating clear patterns of independent existence. In most States, mature minors and emancipated minors may consent to their own medical care. Logic would seem to dictate that these two groups be accorded a similar right to refuse care, but that right is not clear. This is especially the case if the refusal would have serious, long-lasting health consequences or might lead to death.

Again, there are both ethical and legal reasons for concern about reliance on these concepts. Ethically, it may be that a 13-year-old young woman who has borne a child is just as immature, perhaps even more so, than a girl her age who has not had a child. Just because her State has a rule that qualifies the 13-year-old mother to function as an emancipated minor may be an insufficient reason, in the judgment of the practitioner, to base judgments on care solely on her decisionmaking process. Clearly, it is never ethically justifiable to accept adolescent consent if the person cannot weigh the risks and benefits.

In addition to ethical concerns, however, there are legal considerations, such as determining what the law specifically requires and the basis for subsequent liability. An examination of relevant cases provides reassurance for providers faced with these concerns. If a practitioner decides that the care is ethically justified (because it is in the best interest of the child and because parental consent is either not possible or is potentially harmful to the adolescent to provide consent, or overly clear legal inability), there is always some risk. However, a review of the cases reveals that a physician has never been found liable for delivering health care to a minor without parental consent and solely on the consent of the minor when:

- The treatment was undertaken for the benefit of the minor rather than a third party;
- The minor was near majority (or at least in the range of 15 years of age or older) and was considered to have sufficient mental capacity to understand fully the nature and importance of the medical steps proposed; and
- The medical procedures could be characterized by the court as less than "major" or "serious," or as "uncontroversial."[8]

Deciding at what age a child can provide adequate consent requires knowledge of State law and an assessment of the abilities of the child, the nature of the intervention, and the strength of the physician's desire to provide the care. No solution is totally without possible risk of liability; some risks will be judged by providers to be worth the chance, given the importance of the care to the adolescent involved.

The Changing World of The Adolescent

The issue of whether to provide care to an adolescent who cannot secure or will not permit parental consent has become ever more critical over the last decade. The general assumption, at least before the middle of this century, was that children generally remained within their family until marriage or late teenaged independence. That assumption is increasingly called into question by the following:

- Households that either cannot or do not control and appropriately care for their children,
- The experience of the drug culture and the number of youths who seek employment in it,
- The rapidly rising high school dropout rate,
- Frequent teenage pregnancies,
- The sharp increase in teenage convictions and incarcerations, and
- The number of runaways who live in our cities.

Adolescents' independence and individual lifestyles may reflect the "shredded"[9] nature of the communities in which they live as much as any growing loss of interest between adults and their children. Increasingly, care providers describe children who are forced out of their homes rather than leaving by choice. Whatever the reason for their aloneness, it makes no ethical or legal sense to insist on involvement of estranged parents in decisionmaking about appropriate medical and psychiatric care and counseling. What does make sense is the creation of new opportunities

for teens to talk with and be counseled by providers who will be involved with their care.

Consider, as an example, the New York State Confidentiality Law that regulates the process of consenting to an HIV test and that provides protections for the data on seropositivity.[10] Under the law, adolescents are not prohibited from consenting to an HIV test on their own, despite the fact that 18 is the stipulated age for consent to medical treatment in general. What this has meant, in fact, is that the physicians, social workers, and other practitioners who work with these teens have insisted that the adolescent have a particular relationship with one provider and have the backup of a concerned and involved adult before the decision is made to opt for testing. If no other adult exists to assume the role, then many programs identify a particular staff person to play the role of the supportive adult. This added ethical obligation is required because of the critical nature of the information and the lonely situation of the teen.

In light of the growing estrangement of teens from their parents, in recognition of changing lifestyles, and in response to the escalating incidence of sexually transmitted disease, teen pregnancy, and AIDS, all States now permit minors to secure medical care and treatment for STDs. Legal experts agree that this permission is enough to permit care for HIV and AIDS without parental consent.[11] Legislators reasoned that the sensitive nature of the diseases and the fear of parental disapproval might discourage youngsters from seeking care that was needed both for the benefit of the adolescent and for the public health benefit of society. Even if STD treatment were not singled out as an area of care that adolescents can consent to on their own, providers would likely be protected in providing care without parental consent by virtue of the emergency doctrine, given that the dangers of untreated STDs and HIV are substantial.

The same sorts of problems are considered when a provider is deciding whether or not to treat teens for substance abuse without parental consent. According to Margaret K. Brooks,[12] in some States the law requires parental consent as a prerequisite for treatment. Despite these requirements, providers will often be faced with the ethical dilemma of whether or not to provide care without parental consent under certain circumstances.

More than half of the States now have specific statutes permitting treatment for AOD abuse without parental consent.[13] In jurisdictions without specific legislative empowerment, either the emergency doctrine or the emancipated minor category may be applicable. One authority states:

> Even in the absence of statute, however, a child with a drug problem who flatly refuses to tell his parents that he needs treatment or to permit the physician to do so undoubtedly would be held competent by a court to give consent to such treatment, since the social and personal consequences to the child of the addiction are so profound and since continuing to make illegal purchases of drugs will subject the child to serious risks of arrest and punishment.[14]

Thus, one can safely assume, despite the contradictions in the law, that providers of medical and mental health care will not be subject to liability for the nonnegligent provision of care to a minor without parental consent. This rule applies in an emergency, if the child is a mature minor or an emancipated minor, if the care is for a STD or a related illness, or for AOD abuse. Whether the parents could be held financially liable for care to which they have not consented is uncertain; professionals who choose to provide care must be ready to absorb the costs of such care. Indeed, the very attempt to collect from the parent, over the objections of the adolescent, could be a breach of the doctor-patient relationship and could compromise the ability of the provider to meet the needs of the young person.

Confidentiality—The Theoretical Bases

Confidentiality about the fact of treatment and the conditions of treatment is considered a basic element of health care delivery and a linchpin of the provider-client relationship.[15] The oaths of professionals protect confidentiality. These are incorporated into most State licensing statutes. In addition, all States, in codification of preexisting common law, have enacted "privilege statutes" that protect communications between doctor, psychologist, social worker, and client. Federal regulations provide special protection for the records of AOD treatment.[16] These regulations, ethical prohibitions, and legal rules protect confidentiality, unless there is a threat of suicide or homicide or a suspicion of child abuse.

Obstacles to Protecting Confidentiality

Arrayed against these fragile supports for confidentiality are 1) third-party payer contracts that require reports on conditions and treatment, 2) narrow constructions of the legal protections, 3) the computerization of medical information and record keeping, and 4) the danger of gossip and less-than-careful discussions in offices, elevators, and corridors. In addition, confidentiality is overridden in some circumstances by mandatory reporting laws. These laws now require notification of the local health departments for a range of illnesses and conditions. STDs, for example, must be reported in all States; AIDS must be reported in some States. Child abuse is reportable in all States.

The reporting of child abuse raises particularly difficult issues for health care providers. Those who favor reporting argue that triggering

the child abuse statute brings at least the hope of special services; the report creates a record that could protect the adolescent if the abuser decides to move both of them to a new location; and the report involves a range of social service agencies that can then be involved in the ongoing surveillance of the adolescent and the family. Those who are against reporting, despite the clear intention of the law, argue that the therapeutic plan for a child requires the cooperation of the adult involved, even when that adult is an abusing one, and that the alternatives for the child if the child is removed from the home are sometimes worse than the abuse.

Finally there is the possible breach of confidentiality based on the "Tarasoff rule." This rule (named after the California case that established it) requires psychotherapists and, perhaps by extension, all caregivers to warn possibly endangered third parties with whom the provider has had no previous relationship.[17] Such warnings are required if the client has specifically identified a potential victim, if there is a feasible plan to cause harm, and if, in the judgment of the therapist, the person has a clear intent to act according to the plan.

This ruling originally caused much concern, especially in the mental health community. Psychiatrists, psychologists, and social workers argued that knowledge of the rule would make potentially dangerous persons avoid therapy, and thus would cause more generalized danger to communities. However, the storm has died down, and most jurisdictions have not adopted similar rules, either by court decision or by legislative action. Nonetheless, providers should check with a knowledgeable attorney to determine whether or not their particular State has such a rule.

With or without the rule, there will be some times when providers feel ethically bound to warn a third party, who is not their client, about a danger. This dilemma of whether to breach confidentiality for the benefit of another arose often at the beginning of the AIDS epidemic, when many seropositive persons were not practicing safe sex. As the circumstance still exists, some providers feel ethically bound to warn third parties, despite the legal and ethical support for confidentiality.

Confidentiality with the Adolescent AOD User

For the adolescent AOD abuser, issues of confidentiality are even more complex. The basic contract negotiated from the outset among the provider, the adolescent, and the parent (if involved) should make clear that there might be circumstances in the future that will require violating the confidentiality of the adolescent. The provider should make clear to the adolescent and the parent that confidentiality will be protected unless: the young person requests that certain information be shared (such as if the adolescent waives confidentiality); the adolescent specifically consents to the release of the information requested, no matter what the source of the requests; or the provider concludes that the adolescent's behavior may lead to harm to himself/herself or to another person. This contract, shared openly with the parent and the adolescent, makes all parties knowing participants in the same game and ensures that all are playing by the same rules.

If an adolescent comes alone to the treatment center, requests care, and refuses to involve a parent, the providers must decide if they are willing to accept the consent of the adolescent as a sufficient basis for providing care. The answer to the dilemma will emerge from the treatment professionals' comfort with the tangle of legal and ethical issues previously addressed and their willingness to provide uncompensated care if that becomes necessary. If the adolescent comes alone, the concept of a confidentiality contract is critical. The contract explains the basis for care and provides guidelines for future behavior that should help in resolving many of the moral dilemmas that are likely to arise around the issue of privacy.

The concept of a contract also reflects the longstanding tradition in medical, social, and psychological services that confidentiality is not an absolute, but is rather a norm of practice that can be appropriately breached when overridden by more compelling interests, like the health of the public or the danger to a specific person. More importantly for this discussion, the Model Act of the American Academy of Pediatrics provides that:

> Any minor who has physical or emotional problems and is capable of making rational decisions, and whose relationship with his parents or legal guardian is in such a state that by informing them the minor will fail to seek initial or future help, may consent to health professionals for health services. . . . After the professional establishes his rapport with the minor, then he may inform the patient's parents or legal guardian unless such action will jeopardize the life of the patient or the favorable result of the treatment.[18]

This statement has been criticized as too cavalier about the right of the child. Some see it as a compromise to favor a fee-for-service structure in which the consent of the parent is a prerequisite to payment. The statement might be interpreted as a time-limited promise of confidentiality; it might also be viewed as a reasonable attempt to balance the competing interests and legal rules that make this area so difficult.

Practical Problems with Confidentiality

There are no significant cases in which a child has sued a physician for breach of confidentiality because the physician revealed information

to a parent or guardian without the permission of the child or over the child's objection. There are also no cases in the reported literature in which a provider has been successfully sued for not sharing information with parents (nondisclosure to parent).[19] In contrast to education records, which are specifically available for parent review,[20] treatment records are assumed to be private.

It would be bad practice for a treating professional to hide behind the wall of confidentiality with a suicidal adolescent. It would be equally problematic if he or she hurried to report the behavior of an adolescent who had just become sexually active, no matter what the contract was with the parent. If a sexually active teenager became involved with multiple partners, however, many of whom were HIV positive, and the adolescent refused to use condoms, the treating professional would probably be justified in contacting the parents in order to develop other avenues to constrain the teen's behavior. In the same way, breaching confidentiality to report the consumption of one beer is substantially different from alerting the parents to a pattern of drunk driving. Even in these cases, however, the treating professional should attempt to secure permission from the adolescent to notify the parents. If all attempts to gain permission from the adolescent fail, the parent or guardian should be told of the destructive behavior.

The provider is never forbidden ethically from sharing information with the parent under circumstances in which the adolescent is a danger to self or others. In fact, the specific and quite detailed Federal regulations protecting the confidentiality of AOD treatment records in federally assisted programs, codified at 42 C.F.R. Part 2, do contain a section entitled "Minor Patients."[21] Generally, these regulations prohibit disclosure of any information, whether or not recorded, that would identify a client as an AOD abuser, directly or otherwise, if the information is obtained by such programs for the purpose of treating alcohol or drug abuse or for the purpose of making a diagnosis or referral for such treatment.[22]

The regulations leave the definition of "minor" and the question of whether parental consent is required for treatment to State law.[23] Where State law requires parental consent to treatment, the fact that the minor has applied for treatment may be communicated to the parent, guardian, or other person authorized under State law to act in the minor's behalf only if the minor consents, or if the minor lacks the capacity to make a rational choice regarding such consent, as judged by the program director.[24] Facts about a minor applicant who lacks capacity may be disclosed to the parent or other legally responsible person, if 1) these facts are relevant to reducing a threat to life or physical well-being of the applicant or any other individual, and 2) the program director judges that the applicant's situation poses a substantial threat to the applicant's or other's life or physical well-being, which may be reduced by communicating relevant facts to the minor's parent, guardian, or other person authorized under State law to act in the minor's behalf.[25]

The guidelines regarding parental notification are unclear once the minor has been accepted for treatment. Some people argue that the parent cannot be notified of facts relevant to reducing a threat to the minor or other individual without first obtaining a court order.[26] It could be argued, however, that even after the minor has been accepted into treatment, the guidelines about confidentiality in AOD treatment under the Federal regulations should ethically be set aside if there is a real danger to the child or to another person. The generalized ethical obligation to prevent harm to the adolescent or to a third party is an overriding one that may "trump" any section of the law under compelling circumstances. In general, the principle of confidentiality is a positive good to be encouraged and supported; however, it can never be an absolute barrier to communication.

If confidentiality were not strongly supported, many fear that adolescents would be less likely to seek continuous care from one health care provider. If protections for secrets and for private behavior were not assured, some adolescents might not seek care at all, while others might seek it from distant places in order to mask their identities and medical histories, thus making good care almost impossible. For these practical reasons, in addition to the others discussed above, the issue of confidentiality will remain central to the treatment of adolescents.

Treatment providers can be assured, at least from a review of the case law to date, that the danger of liability from following the patterns of practice described in this section is slim. Yet, this is a society that is given to lawsuits, and, in ethically thorny areas, there is always some hypothetical danger. In this arena, as in others, a thoughtful approach that is carefully documented in the treatment record is the best defense in a later challenge to the behavior.

Screening Without the Knowledge or Over the Objection of the Adolescent

What dilemmas are presented to the physician who is asked by the parent or guardian to screen for substance use over the objection of, or without the knowledge of, the adolescent? Screening for or treating substance use over the adolescent's objection or without the adolescent's knowledge is inappropriate. This sort of imposed behavior is appropriate only within the confines of State power or within the judicial process, where due process is hopefully the guide to, and the restriction on, the imposed behavior. More information about the legal-

ethical issues of screening and assessment are addressed in the companion Treatment Improvement Protocol published by the Center for Substance Abuse Treatment (CSAT), *Screening and Assessment of Alcohol- and Other Drug (AOD)-Abusing Adolescents.*

Two of the inherent powers of government in the Anglo-American tradition are the *parens patriae* power that permits the State to intervene to protect those who cannot protect themselves, and police power, which permits the State to intervene to protect the public. Both evoke due process protections. The former is governed by the civil commitment laws that require a determination that the person is a danger to himself or others. The latter is governed by the criminal law and requires that it be proved that the person has committed a crime for which punishment is appropriate.

It would be practically impossible, and generally inadvisable, for providers to attempt diagnosis or treatment over the objection of the adolescent. Diagnosis or treatment by subterfuge and trickery would be a substantial breach of the provider-adolescent relationship and the promise of trust that forms its basis.

The Incarcerated Adolescent

The Ethical Dilemmas of Correctional Health Care

Correctional institutions are designed to confine and punish. Health care providers are obligated to diagnose, comfort, and cure. This inherent and unresolvable tension has led to a difficult, and sometimes impossible, relationship between the two disciplines and among practitioners who are forced to work together and inhabit the same space. These tensions may be less evident in juvenile facilities, where the surroundings seem less intimidating, frightening, and forceful than those of a maximum security prison. Nevertheless, confinement colors the relationship between providers and clients. Similar issues arise for providers in the court or parole system. As in the dilemmas discussed in "Legal and Ethical Issues," the best assistance for comfortable practice can be found in a clearly stated code of conduct that can be used to avoid difficult administrative situations.

Health care providers in a juvenile correctional facility must remember that they will be viewed with initial suspicion by the adolescents, as they are part of the staff that leaves at night and returns to the free world. They will also be viewed with some suspicion by the correctional staff, who will recognize that the goals and tasks of health care providers are distinct from those of the guards and might even be at odds with them. In the end, however, the security forces hold the keys and determine, to a very great extent, whether the plans for care devised by the medical staff will, in fact, be carried out.

The relationship between the two staffs is thus somewhat of a marriage of convenience that must work well for adolescents to receive good care. Health care is one of the most common issues on which correctional facilities are sued, and it is therefore in the interest of the institution to have a facility that functions well and delivers constitutionally adequate medical and mental health care. For caregivers interested in the health and well-being of adolescents, a juvenile facility may be one of the most rewarding places to work. Many of these youngsters have received little or no medical or mental health care in their lives. The good that can be done is substantial and the benefit far-reaching.

A Brief History of Prison Health Care

For much of the history of this country, prisons were assumed to be the responsibility of wardens and guards. The general public wanted little to do with their operation and nothing to do with their problems. Most correctional facilities were built away from centers of population and were considered by the law, the public, and administrative agencies to be under the control of the officers in charge. Traditionally, those incarcerated, with some exceptions in times of revolution or civil war, were the poor or the truly deviant—neither of which were the ongoing concern of the majority of law-abiding citizens.

In the 1950s and '60s, some of this began to change. As a result of the civil rights movement, white, middle class, well-to-do persons, including young persons, were being placed in Southern jails. The conditions in these institutions were horrible and the persons confined described their experiences to their well-connected parents and friends and to journalists. The civil rights movement also spawned a series of other "rights" movements, including the prisoners' rights movement. Federal funding for poverty law offices produced a new breed of lawyer not dependent on the fee-for-service system and committed to pursuing the rights of the least fortunate through the Federal courts. In 1973, the United States Supreme Court declared an end to the "hands off" doctrine that had shielded most issues of prison administration from judicial scrutiny and review.[27] Finally, the circumstances themselves cried out for reform.

A series of Federal Court cases in the 1960s and '70s described the sorts of conditions that were found in State prisons and jails. Cases described the most horrendous conditions, ones that were incompatible with modern norms of decency and permissible behavior. In *Newman v. Alabama,*[28] the court described:

> A quadriplegic, who spent many months in the hospital at the M & D C (Medical and Diagnostic Center), [and] suffered from bed sores which had developed into wounds because of lack of care and which eventually became infested with maggots. Days

would pass without his bandages being changed, until the stench pervaded the entire ward. The records show that in the month before his death, he was bathed and his dressings were changed only once.

Other cases described unsupervised inmates providing medical care, performing suturing and even minor surgery, and an incontinent and paralyzed inmate strapped to a board to keep his bed clean. In response to these cases, the United States Supreme Court declared in 1976 that inmates, including juveniles, had a constitutional right to medical care while incarcerated, based on interpretations of the Eighth Amendment that precludes "cruel and unusual" punishment.[29] The court, following a series of lower Federal Courts, reasoned that to put someone in prison where they cannot secure their own health care, and not to provide that care, could result in precisely the sort of pain and suffering that the Eighth Amendment is designed to prohibit. They articulated the following standard:

> Deliberate indifference to the serious medical needs of prisoners constitutes the unnecessary and wanton infliction of pain . . . proscribed by the Eighth Amendment. This is true whether the indifference is manifested by prison doctors in their response to the prisoner's needs or by prison guards in intentionally denying or delaying access to medical care or intentionally interfering with treatment once prescribed.[30]

Following this key Supreme Court case in 1976 came hundreds of Federal Court cases elaborating the sorts of care required, including psychological or psychiatric care, restrictions on isolation units and solitary confinement, specialty care for orthopedic problems, and many other sorts of care. Three basic rights have emerged from all of these cases:

- The right of access to care,
- The right to a professional medical judgment,[31] and
- The right to care that is ordered by a health care professional.

Ethical Dilemmas in Delivering Health Care to Incarcerated Juveniles

Like their colleagues in the community, health care professionals are bound by the same ethical guidelines when practicing in a correctional institution as when practicing in a private office or hospital. That simple fact, if understood and made the basis of action, will simplify many of the dilemmas encountered in the course of practice. The ethical imperatives—the need to protect confidentiality, the nature of the doctor-patient relationship, the need for trust, the requirement to respect the patient, the critical nature of the informed consent process—all of these ethical issues, and their guidelines for resolution, remain the same.

The adolescent may be in a confined setting but he or she is still the patient-client. The physician needs, therefore, a private place in which to interview and examine the patient, a confidential cabinet in which to store patient files, and an understanding with the correctional administration that the health and mental health care space deserves the same respect that it would receive outside the facility.

There are circumstances, however, where the correctional setting poses ethical dilemmas for the correctional health provider for which there are no parallels in the community—for example, requests by correctional staff to facilitate punishment of the detainee. The rule is: If it seems like a nonmedical function and would be inappropriate in a private office, it is inappropriate in a correctional setting. The rule works well for requests to do body cavity searches, to collect physical specimens for forensic reasons, to witness the use of force in a forced transfer, approve restraints for a nonmedical purpose, to participate in any plan of punishment, or participate in any way in the decision to place an adolescent in disciplinary segregation. None of these are compatible with the role of the treatment provider.

Providers should be careful to adhere to the doctrine of the privacy of the provider-client relationship, to be guided by the adolescent's consent, and to be mindful of what is in the adolescent's best interest. Data that will be turned over to the court or parole system and that will be used to assess or judge the adolescent or to assess guilt should not be compiled by the treating professional but rather by special professionals hired for that purpose. Providers must be clear about their role, goals, and loyalties.

Special Characteristics of a Prison Setting

Any correctional setting provides an ongoing challenge to care providers to define their responsibilities to clients and to be guided by that definition. Experienced care providers report that it requires constant vigilance, self-awareness, and periodic reexamination to avoid being co-opted by a developing identification with correctional authorities, their goals, modes of thinking, and relationship to detainees.

Respect for clients and regard for their rights and well-being must always be the primary activating principle for care providers. Modern biomedical theory is premised on the proposition that the person's choice is central to the interaction because the individual has the legal right to decide and the moral authority supporting that right. But the very foundation of correctional philosophy is that someone other than the detainee has the ultimate authority over his behavior and freedom. It would require a perverse genius to construct a setting, philosophy, operation, staffing, and control as inimical to the assumptions of

medical ethics as a correctional facility.

Detainees understand the difference between a medical and a correctional setting. The use of health care services is far higher in a correctional facility than on the outside. There are a few explanations for this phenomenon. Years ago, an inmate said, "Everything hurts more in prison." As you isolate a person from the outside world, there is a tendency to focus inward. There are also fewer distractions or demands. If you live outside of prison and have an important task, you will likely push ahead despite a cold or a few pains; but why do so in prison? In addition, many of the over-the-counter medications like aspirin or hand cream are only available in the medical office. Most of the contraband items could, it is feared, be used to harm oneself or others.

Detainees also go to the medical service's space in the institution because it is a place to talk to people who relate to them differently than the guards do. That may be especially true for juveniles who, despite the crimes they have committed, have some—or a great deal—of the child left in them. The ability to talk to the nurse and get some positive attention may, in fact, serve to calm the hurt. These are roles that the health service plays in the institution and in the lives of the children and adolescents, and that should be anticipated by caregivers.

The problem, of course, is that with the over-incarceration of persons, including juveniles, most health services are understaffed and hard pressed to meet the "real" medical needs of the detainees. Despite the fact that there are, clearly, some detainees who will abuse the service and try to receive a disproportionate share of staff time, most of the visits are legitimate if one thinks of the general well-being of the adolescent as the responsibility of the health service.

Informed Consent and the Right to Refuse Care

Informed consent is the process of ensuring that the client's values and preferences govern the care provided. This goal is no different within a correctional facility than in other facilities. However, there are major differences in how the goal is carried out; these differences arise from the setting. First, a provider must ensure that the adolescent has adequate access to the treating professionals. This leads to one of the ethical imperatives that exists only within a correctional facility—the obligation of professionals to be aware of systems and to be certain that there is adequate access to care.

There is a second problem with informed consent, and that grows out of the debates over the "nature" of correctional facilities and whether any incarcerated individual is ever free to provide voluntary consent. The best answer to this challenge is that, whatever the constraints, the individual's consent is still the closest to the mark and better than any other method of avoiding coercion.

There is a third and most important problem with the consent process. Inside a locked facility it is very difficult to distinguish between care that is refused and care that is denied. Treating professionals can never be certain, unless they seek the answer from the detainees themselves, whether the adolescent decided not to come for care, or whether one of the guards, or the process of the institution, precluded his or her coming. When any adolescent fails to appear for treatment, someone must determine whether he or she decided not to come because the symptoms abated, because of a conflicting program or a family visit, or because he or she was prevented from coming. As a result, all treatment services must verify refusals.

Confidentiality

Confidentiality is important to the provider-client relationship and to the trust that the provider must establish to practice effectively. Histories of drug and alcohol use, as well as incidents related to trauma or to sexual abuse, are far more likely to be explained accurately to a provider if the adolescent is sure of the privacy of the conversation. Because institutions are brutal and contain consenting and unconsenting sexual relationships, ongoing trust is essential to providing adequate ongoing health care.

Nonetheless, if the provider acquires information that indicates an immediate danger to the adolescent or a danger to others, that information must be communicated to correctional authorities. When there is no identifiable danger, clients' secrets should be protected.

AOD Treatment in the Facility

The obligations of a treatment provider involved in a substance abuse program in a juvenile facility are basically the same as for someone in private practice. The adolescent is owed the same respect and protection of privacy. It is the obligation of the provider to set the terms of his or her agreement with the adolescent and to make those terms known to the facility. If the adolescent is involved in court-ordered treatment, the provider should only undertake the treatment if he or she is assured by the facility, and the judge, if necessary, that the privacy of the adolescent will be respected. In the event of court-ordered treatment, the provider might need to report to the court on the commitment of the adolescent and the progress of the treatment. One effective way to deal with this requirement is to involve the

adolescent in the process of writing the report and to secure his or her permission before it is sent.

In general, providers must be clear what their contract is with the adolescent. If providers are working for the court or parole, they must clearly convey this to the adolescent. Providers treating for the benefit of the adolescent should adhere to the ethics of privacy.

Conclusion

Given the prevalence of substance abuse among adolescents, it is critical that treatment professionals be willing to provide substance abuse treatment in the community and in juvenile detention facilities. The ethical dilemmas that surround the care of adolescents are multiplied when the subject of treatment is one that most often involves a crime and always involves special considerations of confidentiality. In this area, as in other thorny areas of practice, the general rules of openness, honesty, and respect for the rights of the adolescent present the most secure way of addressing the adolescent and meeting the adolescent's needs.

Endnotes

1 This document was prepared for the consensus panel by Nancy Neveloff Dubler, LL.B., Department of Epidemiology and Social Medicine, Montefiore Medical Center, Albert Einstein College of Medicine, 111 East 210th Street, Bronx, New York 10467.

2 See Brooks, Margaret K. "Ethical and Legal Issues in Screening and Assessment of Adolescents," *Treatment Improvement Protocol: Screening and Assessment of Alcohol- and Other Drug (AOD)-Abusing Adolescents, The Recommendations of a Consensus Panel,* published by the Center for Substance Abuse Treatment and available from the National Clearinghouse for Alcohol and Drug Information, P.O. Box 2345, Rockville, MD 20852; (800) 729-6686.

3 *Estelle v. Gamble,* 97 S. Ct. 285, 429 U.S. 97, (1976).

4 Some of the materials in this section were previously presented in chapter 7: "Ethical and legal considerations," *Substance Abuse: A Guide for Health Professionals,* American Academy of Pediatrics, Elk Grove Village, IL, 1988.

5 *Schloendorff v. Society of New York Hosp.,* 195 N.E. 92 (N.Y. 19140), *overruled on other grounds* by *Bing v. Thunig,* 143 N.E.2d 3 (1957).

6 *Cauterburg v. Spence,* 464 F.2d 772 (D.C. Cir.) *cert. denied,* 409 U.S. 1064 (1972) (all information material to the patient's decision).

7 Holder, Angela R., 1985, *Legal Issues in Pediatrics and Adolescent Medicine,* 2d ed., New Haven, CT, Yale University Press, p. 126.

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9 Mindy T. Fullilove, presentation to the New York State AIDS Advisory Council, Ad Hoc Committee on Adolescents and HIV, Nov. 1990.

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15 Siegler, J, 1982: *Confidentiality and Medicine: A Decrepit Concept,* N.E.J.M. 307:1518

16 42 C.F.R. Part §2.14.

17 *Tarasoff v. Regents of the State of California,* 556 P.2d 334 (1976).

18 Holder, *supra,* note 6, at 143.

19 Holder *supra,* note 6.

20 The Federal Family and Education Rights Privacy Act of 1974, i.e. The Buckley Amendment, 20 U.S.C.A. §1232g.

21 42 C.F.R. §2.14.

22 42 C.F.R. §2.12(a).

23 42 C.F.R. §2.14(a), (b), (c).

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26 Legal Action Center, 1991. *Confidentiality: A Guide to the Federal Laws and Regulations.* New York: The Legal Action Center of the City of New York, Inc.

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29 *Estelle v. Gamble,* 97 S. Ct. 285, 290, 429 U.S. 97, 104-105 (1976).

30 *Id.*

31 Boney, J.M., Dubler, N.N., and Rold, W.J., 1991. "The legal right to health care in correctional institutions," in *Prison Health Care: Guidelines for the Management of an Adequate Delivery System*, Jaye Anno, Ph.D., National Institute of Corrections, U.S. Department of Justice, Washington, D.C.

Chapter 7—Cost Models for Adolescent Treatment Programs

Overview

This chapter describes three sample adolescent treatment programs that vary with regard to treatment intensity: 1) combined intensive and nonintensive outpatient treatment, 2) intermediate residential treatment, and 3) psychosocial therapeutic community treatment. An annual expense budget is described for each of these sample programs. The budgets are based on census parameters and staffing patterns expected for each level of care. These cost models can be used by State agency directors and program directors to establish treatment program budgets.

Method

The information base used to develop the sample treatment programs and cost models was derived from multiple resources. These resources are identified in the addendum. Extensive interviews were conducted with 17 representatives from 14 treatment organizations nationally. Most representatives were program directors, while others were from other positions in management. Several of these respondents were also members of the consensus panel. From these 14 treatment organizations, actual budgets, financial data, and staffing profiles were obtained, representing 42 separate and distinct programs. Many of these programs are managed or owned by a parent organization.

Interviews were also conducted with seven representatives from four State agencies. These individuals supplied information regarding the way that budget and funding issues can affect programs. Also, information was obtained from several other experts in the adolescent treatment field through interviews. Finally, data were obtained from literature searches, State law, national surveys, and cost studies.

Limitations

The program cost models are not intended to address all treatment and service options as described in the treatment improvement protocol (TIP) continuum of care section. For example, costing for issues raised in the juvenile justice segment is not addressed.

Additionally, the following types of care are not included in the cost models for the three sample programs:

- Primary prevention services
- Early intervention services
- Day treatment or partial hospitalization
- Intensive medical or psychiatric inpatient treatment
- Halfway houses
- Group homes.

While these cost models may not be in concert with traditional program budgeting, consideration is given to projection of the likely costs required to follow the recommended treatment protocol for each sample program.

Assumptions

All three program cost models assume the following.

- Treatment services are comprehensive and community-based, with decision-making responsibility and management at the regional and local levels in order to optimize limited funding for services.
- All sample treatment programs fall under the clinical and administrative umbrella of an existing system that provides the transition of clients from one level of treatment intensity to another.
- There is no correlation between estimated costs and geographic or demographic factors. There was an initial intention to describe the influences of urban, suburban, and rural settings on costs. However, research revealed that costs are sensitive to several factors within a given setting, and that distortion would be created by attempting to segregate such factors.
- Start-up costs are not included. An emphasis has been placed on establishing the clinical aspects of treatment programs within an existing network of treatment services, without the initial costs associated with start-up programs.
- Capital asset acquisition costs are not included. They are assumed to be included in administrative and management expenses, or facility costs.

Overview of Sample Programs

The three sample programs and projected census parameters are summarized below. Descriptions of each treatment program and projected costs are provided in the following sections of this report. Each cost model includes a projected annual expense budget with notes detailing major assumptions for each budget.

1. Combined intensive and nonintensive outpatient treatment:
   - Fifty adolescent slots
   - Annual caseload of approximately 250
   - Average length of treatment of 3-6 months.
2. Intermediate residential treatment:
   - Twenty-five adolescent bed slots, average 90 percent utilization
   - Annual caseload of approximately 160
   - Average length of stay of 40 days
   - Average daily cost per bed of $175.00.
3. Psychosocial therapeutic community treatment:
   - Fifteen adolescent bed slots, average 90 percent utilization
   - Average length of stay of 6-24 months
   - Average daily cost per bed of $100.00.

All treatment programs will be driven by the availability of funding. Thus, many costs depicted in the models will fluctuate accordingly. Funding will determine the level of core staffing, and in turn, subcontracted professional services. Once the range of funding is established and staffing is determined, direct operating costs can then be projected to complete the budgeting process.

The keys to establishing and operating successful treatment programs include: (1) the development of contemporary budgets that address the various cost factors required by the specific type of program, and (2) raising the necessary funding for that type of program. Funding sources will vary greatly; the main sources will be Federal and State grants, county and civic fund drives, the United Way, third-party reimbursement, and private payers. In order to operate effective adolescent treatment programs with limited availability of resources, it is necessary to maintain a balance between funding and costs.

Combined Intensive and Nonintensive Outpatient Treatment

Program Definition

Combined intensive and nonintensive outpatient treatment is the delivery of outpatient treatment services in a setting detached from an inpatient or residential program. This model may serve adolescents who are functioning effectively enough to live at home, attend school, or hold a job. It may also serve as a transitional support system for adolescents coming from an inpatient or residential setting.

Nonintensive outpatient patients will receive less than 9 hours of treatment per week. Intensive outpatient patients will receive 9 to 20 hours per week. Intensity level should be based on ongoing assessment of adolescents' needs.

Treatment Approach and Components

The model is a structured program advocating a family-centered approach. The program addresses cultural and racial issues, collaborates with juvenile justice and child welfare systems, and is sensitive to cognitive developmental and psychosocial factors.

Design of this type of program model draws upon the 20 core treatment components (specified in Chapter 3), with the relative magnitude of each component determined by the projected capacity of the program. Minimally, the program components include: intake and screening, assessment, evaluation, diagnosis, counseling and therapy (individual, group, and family), psychiatric interventions and dual diagnosis services, education, case management, continuing care and followup, and 12-step self-help participation.

Census Parameters

The census parameters include the following:

- Fifty adolescent slots
- Annual caseload of 250
- Average length of treatment of 3 to 6 months.

Exhibit 2 illustrates a projected budget, core staffing costs, and payroll taxes and benefits.

Consultant Staffing Costs

Professional consultant services have been assumed as follows.

Registered nurse. Based on 1991 American Nurses Association Survey, the salary range for registered nurses is $26,400–$39,564. The model is based on an average annual salary of $33,000, which is not adjusted for specific geographic and educational differences, experience level, or other factors.

Physician (family practice). National data sources indicate that the salary range for family practitioners is $80,000–$130,000. For contracted services, the model assumes an average of 90 hours per year at $60 per hour. Commonly, physicians associated with public programs receive below-average compensation.

Psychiatrist. Based on actual budget data and interviews, the model assumes an average of 8 hours per week, 48 weeks per year, at $100 per hour.

Exhibit 2
Projected Annual Expense Budget
For Combined Intensive and Nonintensive Outpatient Treatment

Core staffing costs	FTEs*	Costs
Program director	0.50	$ 20,500
Clinical supervisor	1.00	31,000
Therapists and counselors	6.00	138,000
Driver	1.00	15,000
Receptionist and administrator	1.50	27,000
Bookkeeper	0.50	9,000
Total core staffing costs	10.50	$240,500
Payroll taxes and benefits		55,315
Consultant staffing costs		
Registered nurse	0.25	8,250
Physician	0.05	5,400
Psychiatrist	0.20	38,400
Direct operating costs:		
Supplies (office/activities)		9,000
Drugs, lab fees, and contracted services		6,500
Telephone		4,000
Vehicle expenses		2,000
Accounting and legal		2,000
Staff development		2,000
Office and postage		1,750
Equipment		1,000
Local travel		1,000
Miscellaneous		2,885
Administrative management		40,000
Facility costs		40,000
TOTAL COSTS		$460,000

* Full-time equivalent staff members.

Core Staffing Costs

Staffing costs and associated full time equivalents (FTEs) are based on interviews, industry surveys, and budget data from sources as identified in the addendum. Salaries depend on level of certification, experience, education, and geographic influences. Therapists are assumed to be certified and possess a master's level education.

	Salary Range	Average Salary
Program director	$38,000-$45,000	$41,000
Clinical supervisor	$27,000-$34,000	$31,000
Therapists & counselors	$18,000-$30,000	$23,000
Driver	$6-7.50/hr	$15,000
Receptionist & administrator	$15,000-$20,000	$18,000
Bookkeeper	$15,000-$22,000	$18,000

Payroll Taxes/Benefits

A review of actual program budgets indicates a range of 16 to 26 percent of salaries for total benefits; 23 percent is assumed for core staff as follows:

	Percentage of salaries
FICA and unemployment taxes	10
Health, life and disability	8
Workmen's compensation	2
Retirement	3
TOTAL	23

Administrative Management

A management service fee is often apportioned by an umbrella or parent organization for program development, marketing, purchasing, human resources, and executive personnel. Based on interviews, this expense often is equal to 10 percent of a program's total expenses.

Facility Costs

Facility costs include the value of a monthly rent or mortgage payment, utilities, maintenance and repairs, and depreciation. Costs for these amounts will vary considerably for each program based on location, square footage, capitalization, and plant assets. Because this category is usually a significant portion of a budget, $40,000 is assumed in the sample budget, which is in line with the projected capacity of the program.

Intermediate Residential Treatment

Program Definition

An intermediate residential treatment program is an intense, short-term residential treatment and continuing care program for adolescents with a primary diagnosis of alcohol and other drug (AOD) abuse. The program is highly structured to provide the adolescent with specific individual skills to achieve long-term sobriety, develop stress tolerance, and build support systems.

Treatment Approach and Components

Based on the requirements of many States, the medical detoxification of adolescents must be carried out in inpatient settings, and therefore is not included in the costing of this model. However, this model is appropriate for nonmedical detoxification (often called social model detoxification), and is assumed to be available within this sample program.

Treatment services include: preadmission assessment, comprehensive evaluation, treatment activities including individual psychotherapy, group and family therapy, 12-step self-help meetings, 12-step instructional groups, addiction education, health education, community meetings and duties, recovery topic groups, peer group discussion, arts and crafts projects, fitness and recreational activities, academic programs, family programs, and continuing care.

This program assumes the availability of community resources and includes access to a fully accredited academic program, with teachers to be provided and funded by the local area school system. Family involvement is an essential component of the treatment program, and parents are required to participate in family therapy sessions with the adolescent.

Census Parameters

The census parameters include the following:

- Twenty-five adolescent bed slots, 90 percent utilization
- Annual caseload of 160
- Average length of stay of 40 days
- Average daily cost per bed of $175.00.

Consultant Staffing Costs

Professional consultant services are provided for as follows.

Physician. National data sources indicate that the salary range for family practitioners is $80,000–$130,000. The model assumes an average of 9 hours per week, 48 weeks per year, at $60 per hour. Physicians in public programs commonly receive below-average compensation.

Psychiatrist. Estimated hourly rates for psychiatrists range from $85 to $150. This model assumes the use of psychiatric consultations for approximately 5 to 7 hours per week, at an average rate of $100 per hour.

Psychologist and M.S.W. Determination of the use of these two professionals will be on a case-by-case basis. Hourly rates range from $35 to $150. A weighted average rate of $75 per hour has been utilized in the sample program, based on 10 hours per week, for 48 weeks per year.

Facility Costs

Facility costs represent rent, utilities, major repairs, and depreciation. These expenses will vary considerably for each program based on square footage, rental or lease values, capitalization, and depreciable assets. Facility costs are incumbent in any operating treatment program. Depending on organizational structure and physical plant, the costs will vary for both fixed and overhead components. Due to the nature of maintaining a 25-bed facility on a 24-hour basis, usage will be intensive, and is estimated annually at $70,000.

Administrative Management Fees

Although many facilities may be freestanding, treatment programs of all levels of intensity are often owned and managed by a centralized entity, or are part of a network of programs operated by a locality, hospital division, or private ownership. Beyond the typical costs for direct staffing, operation, and facility costs, most programs will need to fund an umbrella management entity or some form of executive ownership. Functions provided in such a relationship include, but are not limited to: executive management, financing, marketing, program development, purchasing, and human resource management. Budgeted expenditures for such costs vary greatly, however, a provision of approximately 10 percent of total budgeted expenses will be assumed for this sample model.

Exhibit 3 illustrates a projected budget, core staffing costs, and payroll taxes and benefits.

Psychosocial Therapeutic Community Treatment

Program Definition

A psychosocial therapeutic community is residential treatment focused on comprehensive psychosocial rehabilitation for a period of usually 6 to 24 months. The program is not of a severity level requiring medically or psychiatrically directed treatment.

Treatment Approach and Components

The program is highly structured to enable the patient to acquire a wide range of specific and individualized skills to achieve long-term sobriety, to tolerate stress, and build support systems. Attention is to be given to cultural, spiritual, and family considerations, as well as sexual, academic, and biopsychosocial needs. As explained in the TIP, this program is for members of the same sex.

The program is designed to provide a wide array of services including: individual, peer group, and family therapy, recreational therapy, a fully accredited academic program (teachers provided by a local school system), vocational opportunities, referral options, relapse prevention, continuing care and continuing care counseling, a foundation in 12-step programs, and exposure to alternative life-styles.

The model program assumes the availability of extensive community resources. The length of stay and frequency of contacts between client and staff are issues that vary greatly. However, the program includes intensive individual therapy daily, as well as participation in family and peer group therapy sessions.

Census Parameters

The census parameters of the model program include the following:

- Fifteen adolescent bed slots at a 90 percent occupancy
- Average length of stay of 6 to 24 months
- Average daily cost per bed of $100.00.

Consultant Staffing Costs

Professional consultant services are provided for as follows.

Family Practice Physician. National data sources indicate that the salary range for family practitioners is $80,000–$130,000. The model assumes an average of 4 hours per week, 48 weeks per year at $60 per hour. Below-average compensation for public program physicians is not uncommon.

Psychiatrist. Based on budget data and interviews, the model projects this position at $100 per hour, 5 hours per week for 48 weeks.

Psychologist. Based on budget data and interviews, the model estimates this position at $75 per hour, for approximately 400 hours.

Registered Nurse. Based on the 1991 American Nurses Association Survey, salary ranges for registered nurses are $26,400–$39,564. The model assumes an average annual salary of $33,000.

Administrative Management Fees

Although facilities may be freestanding, treatment programs of all levels of intensity are often owned and managed by a centralized entity, or are part of a network of programs operated by a locality, hospital division, or private ownership. Beyond typical direct staffing, operating, and facility costs, programs often fund an umbrella management entity or some form of executive ownership. Functions provided in such a relationship include, but are not limited to: executive management, financing, marketing, program development, purchasing, and human resource management. Budgeted expenditures for such costs vary greatly. However, a provision of approximately 10 percent of total budgeted expenses will be assumed for this sample model.

Facility Costs

Facility costs represent rent, utilities, major repairs, and depreciation. These expenses will vary considerably for each program based on square footage, rental or lease values, capitalization, and depreciable assets. Facility costs are incumbent in any operating treatment program. Depending on organizational structure and physical plant, the costs will vary for both fixed and overhead components. Due to the nature of maintaining a long-term, 15-bed facility, such costs would be likely to be less than that of a higher capacity program, as is illustrated in the intermediate residential treatment program.

Exhibit 4 illustrates 4 projected budget, core staffing costs, and payroll taxes and benefits.

Exhibit 3
Projected Annual Expense Budget
For Intermediate Residential Treatment

Core staffing costs	FTEs	Costs
Program Director	1.00	$ 41,000
Clinical Director	1.00	33,000
Registered Nurse	1.50	49,500
Counselors (certified)	3.00	84,000
Counselor Aides	8.00	160,000
Family and Activity Therapist	1.00	25,000
Case Manager (responsible for assessments)	1.00	25,000
Medical Records Technician	0.25	2,500
Driver	1.00	15,000
Cook	1.00	10,000
Maintenance	1.00	20,000
Office Manager/Bookkeeper	1.00	24,000
Receptionist/Clerk	1.00	17,000
Total Core Staffing Costs	21.75	$506,000
Payroll taxes and benefits		116,380
Consultant staffing costs		
Physician (family practice)	0.25	25,920
Psychiatrist	0.15	30,000
Psychologist and M.S.W.	0.25	36,000
Direct operating costs:		
Food and beverage		25,000
Drugs, lab fees, and contracted services		10,000
Supplies and small equipment		10,000
Telephone		6,000
Vehicle expenses		4,000
Staff development and training		4,000
Legal and accounting		4,000
Local travel		3,000
Miscellaneous		4,700
Facility costs		70,000
Administrative management		90,000
TOTAL COSTS		$945,000

Core Staffing Costs

Core staffing FTEs and costs are based on interviews, industry surveys, and actual budget data from sources as identified in the addendum. Salaries will fluctuate, dependent upon experience, education level, and geographic differences.

	Salary Range	Average Salary
Program Director	$38,000-$44,000	$41,000
Clinical Director	$26,000-$34,000	33,000
Registered nurse	$22,000-$38,000	33,000
Counselors-Certified Addiction	$18,000-$34,000	28,000
Counselor Aides	$14,000-$28,000	20,000
Family/Activity Therapist	$18,000-$31,000	25,000
Case Manager	$18,000-$31,000	25,000
Medical Records Technician	$ 8,000-$15,000	10,000
Driver	$ 6.00-$8.00/hr.	15,000
Cook	$ 7,000-$12,000	10,000
Maintenance	$18,000-$35,000	20,000
Office Manager/Bookkeeper	$17,000-$30,000	24,000
Receptionist/Clerk	$15,000-$22,000	17,000

Payroll Taxes and Benefits

A review of program budgets indicates a range of 16 percent to 26 percent for total benefits. The model includes 23 percent of total core staffing salaries, as total benefits.

	Percentage of Salaries
FICA/Unemployment Taxes	10
Health, Life, and Disability	8
Retirement	3
Workmen's Compensation	2
Total	23

Exhibit 4
Projected Annual Expense Budget
For Psychosocial Therapeutic Community Treatment

Core staffing costs	FTEs	Costs
Program Director	1.00	$41,000
Clinical Director	1.00	31,000
Counselors (certified)	8.00	184,000
Counselors (Continuing Care Coordinator)	1.00	25,000
Family Therapist	1.00	23,000
Education Coordinator	1.00	20,000
Resident Manager	1.00	20,000
Cook	0.50	4,000
Driver	1.00	15,000
Maintenance	0.25	5,000
Officer Manager/Bookkeeper	1.00	20,000
Receptionist/Clerk	0.50	9,000
Total Core Staffing Costs	17.25	$397,000
Payroll Taxes/Benefits		91,310
Consultant staffing costs		
Physician (family practice)	0.10	11,520
Psychiatrist	0.125	24,000
Psychologist	0.20	30,000
Registered nurse	0.10	3,300
Direct operating costs:		
Food and beverage		25,000
Recreation and special events		8,000
Drugs, lab fees, and contracted services		6,000
Supplies and equipment		5,000
Telephone		4,000
Accounting and legal		3,000
Vehicle expenses		3,000
Staff development and training		3,000
Postage		1,800
Local travel		1,500
Miscellaneous		2,570
Administrative management		70,000
Facility Costs		60,000
TOTAL COSTS		$750,000

Core Staffing Costs

Core staffing costs and FTEs are based on interviews, industry surveys, and budget data provided by sources as identified in the addendum. Salaries will depend on level of certification, experience, education, and geographic influences.

	Salary Range	Average Salary
Program director	$38,000-$45,000	41,000
Clinical director	$27,000-$35,000	31,000
Counselors (certified)	$18,000-$31,000	23,000
Counselors (continuing care)	$18,000-$30,000	25,000
Family therapist	$21,000-$35,000	23,000
Education coordinator	$18,000-$30,000	20,000
Resident manager	$18,000-$25,000	20,000
Cook	$ 7,000-$10,000	8,000
Driver	$ 6.00-$7.50/hr.	15,000
Maintenance supervisor	$18,000-$25,000	20,000
Office manager/bookkeeper	$17,000-$20,000	20,000
Receptionist/clerk	$15,000-$22,000	18,000

Payroll Taxes and Benefits

A review of actual program budgets indicate a range of 16 percent to 26 percent for total benefits. The model assumes 23 percent for core staff as follows:

	Percentage of Salaries
FICA & unemployment taxes	10
Health, life, and disability	8
Workmen's compensation	2
Retirement	3
Total	23

Addendum: Resources Used to Develop Cost Models

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4. State of Illinois DASA licensure regulations; Medicaid program certification standards; Medicaid reimbursement rates for three- and four-hour service visits; a Project SAFE Manual, 1985 survey of IOP programs.
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6. Medicaid Financing for Mental Health and Substance Abuse Services for Children and Adolescents, Office for Treatment Improvement, DHHS.
7. National Survey of Hospital and Medical School Nursing Salaries, University of Texas Medical Branch at Galveston, October 1991 (from American Nurses Association).
8. Socioeconomic Characteristics of Medical Practices, 1991.
9. Physician Executive Management Survey, 1990.
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11. American Group Practice Association, Physician Salary Survey, 1991.
12. Medical Economics, September 1991, Salary Surveys.
13. Residential Treatment Center Financial Projections, Extracted from CONs, from Ted Giovanis.
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16. Beech Hill/Outward Bound ACD Program description.
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18. DHMH State of Maryland Contract form.
19. Seneca Melwood Treatment Centers Budgets and Program.
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21. Cost-Effective Options for Emotionally Disturbed and Substance-Abusing Adolescents, Office for Treatment Improvement, October 1989.
22. Bruce Abel and Sylvia Roehnelt, Looking Glass, Eugene, Oregon.
23. Paul Nagy, Community Guidance Clinic, S.A., and Terre House, Duke University, Durham, North Carolina.
24. Joseph Bottari and Terrence McSherry, Northeast Treatment Center; Newark, Delaware; Philadelphia, Pennsylvania.
25. Susan Wallace and Rose McIlvae, Caritas House, Pawtucket, Rhode Island.
26. Gary Giron and Victor Ortiz, La Nueva Vida, Santa Fe, New Mexico.
27. Richard Sioni, Lois Jackson Unit of Finin Center, Cumberland, Maryland.
28. Elizabeth Duncan and Sarah Pert, Spartenberg AOD Council, Spartenberg, South Carolina.
29. Beth Pollock, Another Path, Rockville, Maryland.
30. Rob Covington, Horizon Adolescent Substance Abuse Program, Fort Smith, Arkansas.
31. Andrea Barthwell, Interventions, Chicago, Illinois.
32. Russ Hagen and Alan Sender, Chestnut Health Systems, Bloomington, Illinois.
33. M.J. Salsbery, Johnson County Adolescent Center for Treatment, Olathe, Kansas.
34. Terry Beartusk, Thunder Child Treatment Center, Sheradan, Wyoming.
35. Joe Hill and Robert Araiza, Arkansas AOD State Director's Office.
36. Court Fisher and Pat Belmont, New Jersey AOD State Director's Office.
37. Dennis Wojtuliewicz, Illinois AOD State Director's Office.
38. Linda Kaplan, NAADAC.
39. Bill Butynski, NASADAD.
40. Dr. William Cartwright and Janice Burger, CSAT.
41. Dr. Beatrice Rouse and Al Woodward, NIDA.

Appendix A—Adolescent Development

There is no clear, universally accepted definition of "adolescence." Differing definitions are based upon chronologic age, physiologic events, and behavioral accomplishments. The consensus panel opted neither to choose among extant definitions nor to create a new one, but rather to agree that, in general, the treatment improvement guidelines (TIP) guidelines would apply to persons aged 11 through 21 years.

Some understanding of what constitutes the process of adolescence helps to differentiate young people from children and adults and serves as a background for the evolution of alcohol and other drug (AOD) abuse treatment guidelines for this age group. The following information is presented in that spirit to provide readers with a format by which they might better understand the developmental processes of adolescence.

The article reprinted here, "Developmental Processes of Adolescence," was written by Andrea Marks and Michael I. Cohen and is slightly abridged and reprinted from *The Volta Review*, Vol. 80, No. 5.

Developmental Processes of Adolescence

Adolescence is perhaps best understood as a process of complementary and interlocking developmental phenomena, the most important of which are physical growth and psychosocial maturation. . . . Herein, we will focus on the normal physical and psychosocial aspects of the process of adolescence as it is experienced generally in our culture.

The beginning of adolescence may be designated as a chronological, behavioral, or physical event; although using any criterion alone can be misleading. For any individual, there is usually a close relationship between these indices of development, but there exists as well considerable variability among individuals.

The Physical Process

The onset of physiological puberty visible to the clinician is usually breast budding in girls and almost always testicular enlargement in boys, although hormonal regulatory changes always precede what we actually see (Boyar, 1972). In addition to maturation of the reproductive system and development of secondary sexual characteristics, the physical process of adolescence includes dramatic statural growth. This is represented by an increase in the rate of growth of skeletal structures as well as other organs, and changes in body composition with a marked increase in weight.

Sexual Development

Tanner (1962) has contributed much to our understanding of the sequence and interrelationship of the appearance of the various pubertal events. Tanner's staging system of sexual development has provided researchers and clinicians with a useful coding and communication tool. Tanner stages 1 through 5 denote progressive development of the breasts in females, the external genitalia including scrotum, testes, and penis in males, and pubic hair in both sexes. Stage 1 represents a prepubertal developmental level, stage 5 is an adult size or configuration, and stages 2, 3, and 4 specify intermediate points of pubertal development. Tanner and his coworkers have examined longitudinally hundreds of normal boys and girls in England in order to establish standards for pubertal development. The clinical use of these staging techniques will offer the clinician a standard of reference (Cohen, 1975) against which a particular patient may be assessed for evidence of adolescent developmental dysfunction (Marshall & Tanner, 1969; 1970). Indeed, recording of Tanner stages of development has become a routine part of our assessment of all teenagers and is regularly noted in their health records.

Developmental growth stages of breasts, genitalia, and pubic hair may be designated by visual examination alone, or more precise measurements, particularly of testicular and penile length and width, may be performed using a tape-measure. Additionally, graded-sized beads are available for comparison with testicle size, such that small increments in growth may be appreciated over short intervals.

The onset of menstruation is the most dramatic pubertal event for girls and the easiest to pinpoint in time. The fact that it may occur at

age 10 or 11 or even 15 and older in healthy girls underlines the variability of pubertal events. Such variability exists as well for the onset of breast and pubic hair development, and the rate of passage through these stages. In Marshall and Tanner's study of English girls (1969), breast development preceded any visible pubic hair in 61 percent of subjects, had its onset at a mean age of 11 years, and reached stage 5 at a mean of 4 years after budding. However, some girls passed from breast stage 2 to 5 in less than a year. No girl completed breast development below pubic hair stage 3 and most only after reaching pubic hair stage 5. Although tending to begin a few months later than breast budding, pubic hair growth passed more quickly to stage 5 and in an average of 30 months.

The mean age at menarche was 13.5 years with a range of 11.5 to 15.5 years. Menarche occurred during breast stage 3 or 4 in 85 percent of the girls, and at a mean of 28 months after breast budding, but as much as 5.5 years later in some. These relationships are important for the clinician to know when asked by a worried 15- or 16-year-old if she is normal despite her delay in onset of menses.

The interval from the first sign of puberty to complete mature development varied from 1.5 years to over 6 years. Age at onset of puberty did not correlate with speed of passage to completion. The mean age of menarche in the United States is about 12.7 years (Zacharias, Wurtman, & Schatzoff, 1970), although we have found slight ethnic differences in the population we serve (Litt, Cohen, & Schonberg, 1973).

Males also showed considerable variability in the age at onset and rate of pubertal development (Marshall & Tanner, 1970). Between ages 13 and 14, normal boys were seen without any sexual development while others had attained adult genitalia and pubic hair. Testicular enlargement preceded any visible pubic hair in 98 percent of the boys, marking the onset of puberty at a mean age of 11.5 years and 6 months later than girls. Males passed from onset to completion of pubertal development in 3 years on the average. However, some boys moved from genital stage 2 to 5 faster than others progressed from genital stage 2 to 3. As seen in girls, earlier onset of puberty did not correlate with speedier progression through the stages.

Increase in Height and Weight

The growth spurt is still another hallmark of the physical process of adolescence. Approximately 15 to 20 percent of ultimate adult height is acquired between ages 10 and 20 years, about half of this growth occurring during a two-year period which includes the phase of most rapid growth, the peak height velocity (PHV). Marshall and Tanner's research (1969, 1970) found the mean PHV for girls at 12 years and boys at 14 years. Girls also generally achieved their PHV at an earlier stage of sexual development than boys. All girls in whom the PHV was detected reached it before attaining adult breasts and pubic hair and always before menarche. In no girl was PHV reached before any breast budding, but in about one-fourth of girls, PHV did precede visible pubic hair.

Ninety-five percent of males reached PHV at genital stage 4 or 5 and none earlier than genital stage 3, although 60 percent were at relatively earlier stages (2 or 3) of pubic hair growth. Pubic hair, in fact, appears about 1.5 years later in boys than in girls. These relationships are important for the clinician to know so as to be able to reassure a 16-year-old, shorter than most of his peers, but at earlier stages of genitalia and pubic hair development, that his growth spurt is yet ahead. New reference standards for height and weight of children and adolescents in the United States have recently been published by the National Center for Health Statistics (1976).

In addition to marked increase in height during adolescence, other skeletal changes occur. Anthropometric changes in shoulder and hip width parallel the height spurt. Shoulder-width growth is much greater in males, and its velocity one of the fastest compared to other measurements. Hip width is the only growth index which is greater in females. Biacromial and bi-iliac crest diameters may be measured with a tape or calipers and followed longitudinally as another sign of an individual's development. The width of the limb bones increases along with and even after deceleration in growth of their length; this change is due to thickening of the boney cortex (Tanner, 1962).

Although we stress the importance of the height spurt of adolescents, an even more striking increase in weight is seen (NCHS, 1976). Weight approximately doubles between ages 10 and 20, contributed to in part by the growth of most all organs as noted above. Boys and girls differ, however, in the relative contribution made by changes in muscle and fat. Both sexes gain muscle mass approximately coincident in time with increases in height, but the muscle gain in boys occurs earlier, lasts longer, and is of greater magnitude than in girls (Tanner, 1962; 1974). Sequential measurements of a boy's calf circumference will dramatize this point.

Throughout childhood, boys are slightly leaner than girls and both sexes accumulate fat slowly during early adolescence. Thereafter, girls experience an acceleration of fat accretion starting about the time of PHV, which continues into adulthood. Boys actually lose fat over a period of several years starting before reaching PHV. This fat losing trend in males is then reversed during late adolescence (Garn & Clark, 1976). By age 20, the average male is less than 10 percent

fat, the female over 20 percent. Frisch and McArthur (1974) found that a minimum weight for height and a body composition of 27 percent fat may be necessary for the onset of menses. In the older adolescent, maintenance of regular menstrual cycles, or restoration of menses following weight loss, may require about 10 percent greater weight for the same height observed at menarche. It has long been observed that obese girls tend to have an earlier menarche and very thin girls a relatively delayed onset. A good estimate of total body fat may be made clinically by measurement of the triceps or subscapular skinfold thickness with special calipers, and reference standards for fatness are available (NCHS, 1974).

Hormonal Development

The many-faceted and dramatic elements of the physical process of adolescence visible to the clinician are initiated and regulated by peptide hormones of hypothalamic, pituitary, and gonadal origins. A complex feedback system among these hormones exists which is responsible for the onset, progression, and cyclicity (in females) of pubertal events. Several releasing hormones, synthesized in the hypothalamus and secreted into the pituitary gland, have been studied. One of these is gonadotropin releasing hormone (GnRH) which stimulates specific anterior pituitary cells to synthesize the gonadotropins, luteinizing hormone (LH), and follicle stimulating hormone (FSH). These in turn regulate sex hormone and ova and sperm production in the gonads. These sex hormones, most importantly estrogens and progesterone from the ovaries of females and testosterone from the testes of males, are primarily responsible for the clinical expression of physical process of adolescence which we observe. The adrenal cortex also secretes sex steroids with estrogenic and androgenic effects in both sexes.

It is hypothesized that, at the time of onset of puberty, GnRH production increases due to a change in feedback sensitivity. That is, throughout childhood, low levels of FSH, LH, and sex hormones are detectable in serum, although the pituitary and gonads have the potential to secrete much larger amounts. However, low levels feed back to a highly sensitive hypothalamus and inhibit GnRH release. The onset of puberty, perhaps mediated by neurotransmitters of higher cortical, limbic system, and pineal gland origin, may represent a decrease in the sensitivity of the hypothalamus to these small amounts of sex hormones, with resultant outpouring of GnRH, and enhancement of synthesis of LH, FSH, and the gonadal hormones themselves (Reiter & Root, 1975).

In recent years, the advent of radioimmuno-assay techniques, which can measure minute concentrations of hormone in serum, have stimulated further research into the molecular aspects of puberty. Even before visible puberty occurs, and in early puberty, LH secretion increases dramatically only during sleep. In late puberty, both sleep and awake secretion of LH exceed prepubertal levels, but still higher levels are reached during sleep than wakefulness. No similar augmentation of LH secretory activity associated with sleep is seen in prepubertal children or normal adults (Boyar, Finklestein, Roffwarg, Kapen, Weitzman, & Hellman, 1972). Knowledge of these normal sequential patterns of hormone production can aid in the evaluation of individuals with delayed, precocious, or otherwise abnormal pubertal development.

Finally, a series of simple chemical determinations may assist clinicians in their attempt to accurately assess the physical process of adolescence. Hematocrits normally increase in males from a mean of 39 percent prepubertally to a mean of 43 percent by stage 5 (Daniel, 1973). A similar rise is not observed in females. Both sexes show a marked increase in serum alkaline phosphatase levels originating from bone, which is maximal just before the individual reaches his or her peak height velocity (Salz, Daum, & Cohen, 1973; Bennet, Ward, & Daniel, 1976).

The Psychosocial Process

There is no exact beginning and no certain sign of completion of psychological and social growth factors involved in the process of adolescence. One criterion put forth is that adolescence begins with the individual's initial psychological reaction to his pubescent physical changes and continues until a reasonable resolution of personal identity is reached (Weiner, 1970). But what of the "late bloomer" or the teenager who never or minimally experiences physical puberty until late in adolescence? Surely, a modified form of the normal psychological and social elements of the process of adolescence for these teenagers precedes their delayed physical changes. The boundaries of this psychosocial process are vague, reflecting emotional and social adjustments during childhood and further influenced by cultural, geographic, and genetic factors.

There are numerous descriptions of this process by many authors (Blos, 1962; Miller, 1974), but it is perhaps best described by the classic study of Margaret Mead in 1928 who repeatedly refers to the struggle, conflict, rebellion, unrest, and idealism characteristic of this vexing time of life. Erik Erikson (1963) warns of the "role confusion" or "role diffusion" inherent in American culture which offers its youth "a history of extreme contrasts and abrupt changes," and a climate of "discontinuous slogans" and "dynamic polarities" in which to develop an identity in harmony with one's view of an adult self.

There are at least three main tasks of adolescence which together contribute to a stable adult identity or self-concept. They are: 1) establishing independence from

parents and family, 2) feeling at ease with one's gender role and sexuality, and 3) formulating a place for oneself as a contributing member of society. For many people, completion of these tasks extends well beyond the adolescent years. The initiation of all three normally begins early in adolescence and generally progresses in sequence with physical development but with notable variability in speed and interrelationship among the three elements. For example, a 17-year-old may be quite comfortable going off to college with a career choice in mind, but only starting to demonstrate an interest in sexuality as evidenced by early dating behavior.

Independence, Sexual Identity, and Career Choice

The adolescent's world generally consists of a family life, peer group activities and relationships, and school or work involvement, all of which involve a fuller exploration of self. Focusing on these three elements of psychosocial development will find the teenager at times struggling with and at times mastering the tasks of independence, sexual identity, and career choice, respectively. For clarity in understanding this process, the clinician should view the nature of the struggle and the degree of mastery in terms of its appearance in early, middle, and late adolescence. The boundaries of the three developmental stages are not precise, but characteristic behavior trends do emerge.

Early adolescence is the time of rapid pubertal development. The body one has been comfortable with for all of one's childhood memory is no longer recognizable. Sudden new inches in height and width must be coordinated with a new acquisition in strength. Menstruation and ejaculation connote reproductive potential as new sexual sensations emerge, while acne, scoliosis, or obesity may put a damper on the wholesome development of body image and self-concept. There may be feelings of shame or embarrassment if changes progress too slowly or too quickly. Tendencies toward extreme self-preoccupation and isolation may be coupled with an involvement in comparing physical changes with peers. Early pubertal changes often pose problems for the adolescent, especially if there is the additional burden of a major physical disability such as significant hearing impairment.

During early adolescence, peer group activities center around the same sex, but a less negative attitude than existed during childhood toward the opposite sex begins to emerge. Same-sex peer activities involve shared interests which are often approached with vigor, such as participation in athletics, work on hobbies, or trips to the movies, stores, and community centers.

School performance may begin to change as greater demands on intellect and time begin to select out those individuals with academic inclinations. School phobia, truancy, or failure may transiently accompany the unrest at this time, but would have more serious psychological implications if prolonged. Ultimate career choice usually is uncertain, but educational program planning along academic or vocational lines is initiated.

Sleeping and eating patterns often change. Napping often during the day, not always associated with staying up late at night, usually reflects the aftermath of physical activity and the demands of rapid growth. The same factors account for the ravenous but frequently picky and peculiar appetites of many young adolescents. Sleeping and eating behaviors are potential sources of conflict with parents, and indeed such conflict is a hallmark of this period.

Early phases of the journey toward psychological autonomy from parents traverses a rocky road. Authority still resides with parents, even in the adolescent's eyes, but challenging that authority begins in earnest, if not consistently, and what emerges is a mixture of loud self-assertion and criticism one minute and cries for nurturing the next. Complete independence is untenable, total dependency is intolerable. Unreasonable demands are made upon parents and self, and "testing" begins. The physically handicapped or chronically ill teenager may have greater difficulty establishing a reasonable degree of independence from parents. He or she generally enters adolescence enmeshed in an especially tight dependency relationship which resists change or may become distorted (McAnarney, 1974).

Middle and Late Adolescence

Middle adolescence is a time of enhanced intellectual abilities and heightened peer group involvement. The concrete thinking of childhood matures during mid-adolescence into the capacity to abstract, and this facilitates development of close friendships for the sharing of feelings and ideas. It is a time of idealism and loyal identification with appealing adult causes, philosophies, and individuals.

Physical growth is less rapid and of less concern, but one's sexual identity is just beginning to be confronted. No longer are changing physical traits just being compared with same-sex friends. Instead, a new sexual being has emerged and begins to experiment and test its attractiveness with the opposite sex. For an adolescent with a significant physical disability, satisfactory integration of the deficit into one's self-concept or body image may not have fully occurred.

During middle adolescence, authority resides with the peer group. Conflict with parents seems more resolved or relatively less potent as the teenager shows enhanced responsibility and judgement. The peer group can be a source of security, but for most adolescents at this stage a truly best

buddy is still valued to replace the "loss" of the parents and shield against the fickleness of friends. Emphasis on style and popularity as evidenced by prettiness, ugliness, being "in," "with it," "hip," or "out-of-it" may be imagined or real, but are always gnawing at the self-image of those in middle adolescence.

This fragile self-image of the normal youth in middle adolescence may look to be bolstered by productive group-identified activities such as athletic teams, school newspaper work, or musical collaborations; or can lead an adolescent into group-pressured excesses in drug or alcohol use, unpleasurable and generally unprotected sexual activity, and even antisocial or illegal escapades. Experimentation with drugs (Litt, Cohen, & Schonberg, 1977), alcohol, tobacco, and sex (Sorenson, 1973; Hein, Cohen, Marks, Schonberg, Meyer, & McBride, 1978) are common during middle adolescence and need not cause major difficulty for a responsible and reasonably secure teenager.

Late adolescence is the time of future planning and emergence of the self into full independence and emancipation. Identity no longer depends upon rebellion against parents, and less upon peer approval. There is often an emotional return to the home and its traditions as disillusionment with parental values is mellowed by gradual acceptance. Friendships and activities are selected, not possessed, and heterosexual relationships reflect greater commonality and commitment.

Independence from parents and sexual identity are still being worked on but with less strain, and career identity may be the greatest source of anxiety. Choices made at this time, although not irreparable, generally point one in a direction for the future. At this stage, the adolescent must choose among getting a job, continuing on to college or graduate school, joining the military, or getting married. For some, these options include an obvious preference, for others they cause anguish and confusion. At this juncture, Mead (1928) and Erikson (1963) point out that our American culture is not the kindest. The vast array of offerings requires considerable maturity on the part of the adolescent in order to choose wisely. Frequently, the older adolescent will make tentative choices because of continuing uncertainty about future goals.

In Summary

The process of adolescence is a complex biologic and psycho-developmental phenomenon. It permits the transformation of a child into an adult during a span of years which whizzes by too quickly or not fast enough. With special understanding from family and peers and support from knowledgeable professionals, however, these developmental tasks of adolescence can be vigorously approached, and in time be fully mastered.

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Appendix B—Specific Drugs of Abuse

Introduction

This appendix is designed as a reference to assist staff in alcohol and other drug (AOD) abuse treatment programs in understanding the pharmacologic, psychoactive, and somatic consequences of particular drugs of abuse. The appendix is adapted from *Substance Abuse: A Guide for Health Professionals,* published by the American Academy of Pediatrics, and edited by S.K. Schonberg. There are literally hundreds of psychoactive drugs that may be abused. This document includes only those drugs (or classes of drugs) that are abused by significant numbers of children and adolescents. Presented in order of 30-day prevalence of daily use by adolescents, these drugs include: (1) tobacco; (2) alcohol; (3) marijuana; (4) cocaine; (5) inhalants; (6) stimulants; (7) hallucinogens; (8) phencyclidine (PCP); (9) opiates; (10) sedatives/hypnotics; (11) tranquilizers; and (12) designer drugs.

Tobacco

Epidemiology

Tobacco was smoked or taken as snuff by the natives in North and South America for centuries and was introduced in Europe as a medicinal herb in the sixteenth century.[1] Soon, however, the use of tobacco became a widespread social practice and it remains so today. A significant part of American history revolves around the lucrative tobacco trade from the colonies in Virginia to England. In the nineteenth century, most of the tobacco used by Americans was as chewing tobacco: few people smoked. However, by the "roaring '20s," smoking had taken over chewing and, by the 1950s, fueled by the returned veterans of World War II, cigarette smoking became a national habit. As the health dangers of smoking began to be documented and publicized in the '60s and '70s, we began to see a return to the use of chewing or smokeless tobacco.

The smoking behavior of adolescents tends to be similar to that of adults. In general, the prevalence of daily smoking by high school seniors has been decreasing in the last decade, from 27 percent of youngsters in 1975 to 17 percent in 1992.[2] A household sample survey conducted in Ontario with younger adolescents found that among the 12-13-year-olds, 3 percent of boys and 4 percent of girls were regular smokers.[3] Among 14-16-year-olds, 16 percent of boys and 23 percent of girls were regular smokers. These data are consistent with those from other studies that indicate initiation of smoking in the early teenage years.

The use of smokeless tobacco is increasing in the adolescent population, particularly among boys. A recent survey of 901 high school students in Arkansas indicated that 37 percent of boys but only 2 percent of girls were current users of smokeless tobacco.[4] Similarly, a survey of 609 eighth, ninth, and tenth graders (mean age 14.5 years) in Pittsburgh revealed that 35 percent of boys and none of the girls reported smokeless tobacco use.[5] In that same survey, 22 percent of girls but only 11 percent of boys reported smoking cigarettes.

The Childhood Antecedents of Smoking Study (CASS), a prospective longitudinal investigation conducted in Minnesota, documented predictors of smoking behavior among young adolescents who had not yet become regular smokers.[6] These included: peer influence (having friends who smoke), having siblings who smoke, having less educated parents (especially for girls), being more independent and rebellious than other adolescents, and being less concerned about the health consequences of smoking. This latter finding was considered encouraging by the authors because it suggests that for younger adolescents "there may yet be value in communicating messages about the health consequences of smoking." A recent retrospective study examining the cognitive and school performance characteristics preceding the onset of smoking in high school students found that cigarette smoking in high school was associated with significantly more school absence in elementary school as well as in high school, lower grade point averages in grades four and six as well as in high school, lower I.Q. in sixth grade, and lower scores on Stanford Achievement Tests in both third and fifth grades.[7] These associations suggest that smoking behavior may be part of life-style differences

among children and adolescents and that smoking prevention efforts must begin early and "address general values and lifestyles rather than only the practice of smoking."

Pharmacology

The active ingredient of cigarette smoke and chewed or snorted tobacco is nicotine. This is a naturally occurring compound that is well absorbed in the lungs by inhalation or through the mucous membranes of the mouth and nose. Tolerance develops with continued use, at least partially because of increased activity of the enzyme systems in the liver that are responsible for deactivation of the drug. Nicotine appears to play a central role in the dependence-producing process of cigarette smoking; however, to claim that smoking is primarily a nicotine addiction would be to ignore the very powerful roles of environmental and social influences and learning behavior that contribute to the initiation and perpetuation of tobacco use.

Nicotine has an adverse effect on the peripheral nervous system and is highly toxic. Symptoms of low-level poisoning—dizziness, nausea, and generalized weakness—are frequently noticed by beginning smokers. A toxic overdose can lead to tremors, convulsions, paralysis of the respiratory muscles, and death. In the central nervous system, nicotine acts to shift brain waves into an arousal pattern. However, most smokers claim that the net effect is relaxation and relief of tension.

Other components of cigarette smoke play a key role in the toxicity of smoking. Carbon monoxide is one such component. Regular smokers have a higher-than-normal amount of carboxyl-hemoglobin, which impairs the oxygen-carrying capacity of their blood. This often contributes to difficult breathing in smokers and impairs oxygen transfer to the fetus via the placenta in pregnant women who smoke. Tars and other carcinogens in both smokeless tobacco and cigarette smoke are responsible for the association between tobacco use and cancer.

Health Consequences

The contribution of cigarette smoking to excess morbidity and mortality from heart disease, emphysema, and lung cancer in older Americans is well known and will not be restated here.[8] Instead, the focus will be on the health consequences of smoking and tobacco use for the adolescent. Several studies have found measurable impairment of lung function in adolescent smokers. One study also showed that smoking in adolescents was associated with lower levels of high-density lipoprotein-cholesterol (HDL-C) that were evident within 2 years of beginning to smoke. Thus, data are accumulating to suggest that abnormalities known to be precursors of smoking-related disease are measurable in young people within a few years of initiation of the behavior.

Laboratory Evaluation

Methods commonly used to verify smoking behavior include measuring saliva or urinary cotinine and nicotine concentrations, carboxyhemoglobin or thiocyanate concentration in blood, and concentrations of carbon monoxide in expired air. These measures are used primarily in research studies.

Treatment Considerations

The most effective treatment for cigarette smoking is to prevent the onset of the behavior. This is particularly important in the child and young adolescent. The most successful smoking prevention programs are school-based, target the very early adolescent in sixth or seventh grade, use peer counselors, emphasize positive health behaviors rather than dwelling on risks, discuss risks that are immediate and applicable to the age group, and teach skills for resisting the social pressures to smoke. Pediatricians have a significant role to play in seizing every opportunity to discourage smoking among the parents of their infant and child patients and especially among their adolescent patients, particularly teenaged girls.[9,10,11] There are data indicating that physician counseling regarding the hazards of tobacco use is effective, even if it only occurs at one visit. For adolescents who are already smokers and wish to quit, there are myriad smoking-cessation programs of variable effectiveness. Nicotine gum or patches may be helpful as an adjunct to treatment.[12, 13] Many smokers try to quit several times before they eventually succeed; thus, the message should be to keep trying. In addition, curtailment of tobacco advertisers, who deliberately target women (including adolescent women) in their advertisements, may be necessary.

Alcohol

Epidemiology

Aside from caffeine, alcohol is used by more people and in larger quantities than any other psychoactive substance. Alcoholic beverages have been consumed by humans since the dawn of time (neolithic man drank berry wine in 6400 B.C.), and efforts to regulate consumption have gone on for centuries.[14] In 1839, England imposed penalties for selling spirits to persons under the age of 16 years, while in the various States of this country, the legal drinking age continues to fluctuate between 18 and 21 years. Despite efforts to regulate teenage drinkers, enormous numbers of adolescents consume alcohol. In 1992, 88 percent of American high school seniors had tried alcohol, 51 percent had consumed it within the past month, and 3 percent drank alcohol daily.[15] In the past, men were more likely to drink than women, but at least in the adolescent population, these differences seem to be lessening.

Boys were still more likely than girls to be very frequent (daily) drinkers (5 percent versus 2 percent). Data from a Canadian household sample survey conducted in 1983 found that among younger adolescents, girls reported more alcohol use than boys: 49 percent of girls versus 43 percent of boys were occasional alcohol drinkers, and 16 percent of girls but only 11 percent of boys in this cohort of 14-16-year-olds reported using alcohol once a week or more.[16]

Children of alcoholic parents are more likely than other children to become alcoholics themselves. It is widely acknowledged that there is some genetic component to alcoholism, especially for men. In addition, family life with an alcoholic parent is often disruptive and sometimes abusive, and can lead to a wide variety of problem behaviors in adolescent children, including AOD abuse.

Pharmacology

Ethyl alcohol is produced by fermentation of the starch or sugar in various fruits and grains by the action of yeast. Fermentation alone will not produce a beverage with greater than 15 percent alcohol because the yeast dies at higher concentrations. More potent alcoholic products must be produced by distillation from the fermented mash.

Alcohol is consumed in the form of beer, made from barley and hops and containing approximately 5 percent alcohol; wine, made from grapes, and approximately 15 percent alcohol; and spirits or "hard liquor" (scotch, rum, vodka, gin), distilled from barley, corn, or sugar cane, with approximately 45 percent alcohol.

Alcohol is quickly and efficiently absorbed from the gastrointestinal tract and requires no digestion. The rate of absorption depends on the concentration of alcohol, the amount and type of food in the stomach, and whether or not the liquid is carbonated. Diluted alcohol is absorbed more slowly than a highly concentrated "shot" of liquor. However, if the diluent is carbonated or the alcoholic product itself is effervescent (for example, champagne), it will pass more rapidly into the small bowel and be absorbed even faster than in the stomach. Eating foods containing fat and/or protein before or while drinking alcohol will help to delay absorption.

Drug effects are noticed approximately 10 minutes after consumption and peak at approximately 40-60 minutes after ingestion. In order to be excreted, alcohol must first be changed in the liver by the enzyme alcohol dehydrogenase.[17] Since alcohol cannot be stored in the body and very little can be excreted by the lungs or kidneys, it will remain in the bloodstream unchanged until metabolized by the liver. If an individual consumes alcohol at a faster rate than it can be metabolized, the blood alcohol concentration will rise. The initial metabolic product is acetaldehyde, a compound that may play a central role in alcohol toxicity.

Tolerance to alcohol develops with frequent moderate-to-heavy consumption. Some of this tolerance can be explained by the induction of enzymes in the liver, which allows faster metabolism of the drug, and some by brain tolerance, an adaptation to the neuropsychological effects of alcohol. Physical dependence develops after years of heavy consumption, after which abstinence results in delirium tremens, a withdrawal syndrome that can lead to seizures and death. This serious withdrawal syndrome occurs rarely in an adolescent.

Health Consequences

Alcohol is a central nervous system depressant. At high blood levels, it leads to respiratory depression, respiratory arrest, and death. At low blood levels, alcohol impairs regulatory and inhibitory control mechanisms in the brain. Complex and poorly learned behaviors, such as driving in young people, are impaired. Individuals often become generally disinhibited and engage in behaviors that would ordinarily embarrass them. Anxiety is reduced; judgment is poor; and attention, short-term memory, and thought processing are impaired. As blood alcohol levels rise, motor coordination becomes impaired, and reaction time becomes quite prolonged. If drinking continues, stupor, coma, and death can ensue.

For the majority of adolescents, the adverse physical health consequences of alcohol consumption result primarily from accidental trauma incurred while intoxicated.[18] Alcohol-related motor vehicle accidents are the leading cause of death for 15-24-year-old Americans either as drivers or passengers. Other types of accidents such as drownings, falls, or fire-related deaths in adolescents have also been shown to be frequently associated with alcohol intoxication.[19] In addition, elevated blood alcohol levels are found in a significant percentage of adolescent suicide and homicide victims. Physical complications of acute intoxication such as coma, gastrointestinal bleeding, lung infection due to the breathing in of food or vomit, or inflammation of the pancreas—called pancreatitis—are relatively rare in teenagers, and usually result from the ingestion of a large quantity of alcohol over a short period of time. Complications of chronic alcoholism such as widespread scarring of the liver or brain damage are virtually unknown in adolescents.

Psychosocial and emotional problems are frequently associated with alcohol use by teenagers. It is often difficult to differentiate whether this emotional ill health is a cause or an effect of the alcohol use. One study of 171 acutely intoxicated 12-18-year-olds brought to the emergency room of a large hospital found that alcohol intoxication was the predominant initial problem in 88 percent of these young persons.[20] Extensive psychosocial investigation of these teenagers and

their families led to the conclusion that alcohol or another drug was the primary problem in 41 percent of these youth. Nineteen percent were judged to have a primary emotional or psychological problem, 17 percent had a family problem, 3 percent had peer relation problems, and 20 percent had no serious psychosocial problems. Of the 171 intoxicated adolescents, 28 percent had alcohol-dependent fathers.

Since alcohol use by teenagers is so prevalent, it is important to define alcohol abuse in this age group. Relatively few—less than 5 percent—of adolescents could be considered alcoholic; that is, addicted to alcohol. Teenagers who can be considered alcoholics drink daily, have a family history of alcoholism, have blackouts or withdrawal symptoms, and continue drinking despite many negative family, school, and social consequences. A much larger group of adolescents, however, may be considered problem drinkers.[21] Fully 19 percent of 14-17-year-old children fall into this category. These are young people who have been drunk six or more times per year and who experience negative consequences from alcohol use two or more times a year. These negative consequences include driving after drinking and troubles with family, friends, teachers, police, or dates that result from drinking. Teenage problem drinkers are at especially high risk for accidents and for significant developmental, educational, and emotional difficulties. Finally, adolescents who are neither alcoholics nor problem drinkers but who nevertheless occasionally drink and become intoxicated are still at some risk for accidents and acute overdose.

Alcohol is a known cause of birth defects. and appears to have its greatest effect on the developing fetus if consumed in large doses early in pregnancy. Many sexually active adolescent girls fail to use adequate contraception, and unintended, undiagnosed pregnancy is endemic to this age group. Thus, many fetuses of adolescent girls are exposed to the harmful effects of alcohol as well as to the secondary additive effects of poor nutrition and multiple drug abuse.

Laboratory Evaluation

Behavioral effects and alcohol toxicity correlate well with blood alcohol levels, which are expressed as grams of alcohol per 100 milliliters of blood. A blood alcohol level of 0.05 percent is usually associated with a "high" feeling; a level of 0.20 percent is associated with marked intoxication; at 0.30 percent, the individual is usually stuporous; and death can occur at blood alcohol levels beginning at 0.35 percent. The concentration of alcohol in the breath is directly related to blood alcohol levels, enabling law enforcement agencies to use a noninvasive method for determining blood alcohol levels. Most agencies define alcohol intoxication as a blood alcohol level of 0.10 percent or higher. Among 16-19-year-olds who had been drinking and were involved in fatal motor vehicle accidents in 1982, blood alcohol levels of 0.10 percent-0.14 percent occurred most frequently. Only 16 percent of the adolescents had levels lower than 0.10 percent, and 28 percent had levels above 0.14 percent.[22]

Treatment Considerations

Acute intoxication should be treated with protective and supportive therapy, including maintenance of the airway and respiratory support with a ventilator, if necessary, until the alcohol can be metabolized and the patient recovers. Large overdoses may cause low blood sugar—hypoglycemia—particularly in children, and blood glucose levels should be monitored. When present, hypoglycemia should be corrected rapidly by administering an intravenous glucose solution.

Adolescents who might be considered alcoholics, either by psychosocial criteria or, in rare instances, by physiologic addiction, may require treatment in a residential treatment facility staffed by individuals with experience and training in the management of adolescent drug abuse. Disulfiram (Antabuse®), a drug that causes headache, nausea, vomiting, and vertigo when alcohol is consumed, may be a useful adjunct to the treatment of the adolescent alcoholic. For the large numbers of adolescents who are problem drinkers, community programs, peer support groups, and individual and family counseling by mental health professionals can all be helpful. Community-based programs, such as Alcoholics Anonymous (AA) and Narcotics Anonymous (NA), have traditionally been used primarily by adults. Some young people have attended the adult meetings and benefitted from them, although many other adolescents have not felt comfortable in the presence of adults. Fortunately, the number of AA and NA programs for young people is increasing rapidly. Some communities even have AA and NA programs that were started by young people; some large weekly AA or NA meetings in cities today are attracting hundreds of youth every week.

Marijuana

Epidemiology

Over 50 million Americans have tried marijuana. Among high school seniors in the United States, approximately one-third have used the drug at least once in their lifetime, with about 20 percent reporting use within the last year, making marijuana the most common illicit drug chosen by adolescents.[23]

With the exception of cigarettes, marijuana is the substance chosen most often by young people for regular use: 2 percent of high school seniors use it daily. A national survey in Canada demonstrated that almost 17 percent of adolescents between the ages of 12 and 19 had used marijuana

within the past year, and that 1 percent used it daily.[24]

Pharmacology

Marijuana is obtained from the hemp plant *(Cannabis sativa)*. The pharmacological effects are related to the content of a chemical, 9-tetrahydrocannabinol (THC), and other forms of cannabis that are found in the leaves and flowering shoots. A resinous exudate called hashish, which is derived from the tops of female plants, contains the greatest concentration of active material. THC is the constituent primarily responsible for the neurophysiological, biochemical, and behavioral manifestations of marijuana ingestion, inhalation, or injection. Its concentration, and accordingly, the dose delivered may vary by as much as a hundredfold, depending on such factors as the presence of contaminants and diluents. Awareness of this variation in potency is essential when comparing studies of the effects of marijuana as well as in managing the intoxicated patient.

Effects begin within seconds to minutes after inhalation of the smoke or within 30 to 60 minutes following oral ingestion. Smoking routes the cannabinoids directly from the lungs to the brain and other organs, with minimal opportunity for dilution or metabolism. Thus, higher concentrations are delivered to the brain more rapidly when marijuana is inhaled than when it is ingested orally or injected intravenously. While the smoker experiences the effects almost immediately and can stop further inhalation at any time, the oral user experiences effects that come on more slowly, last longer, and are more variable, making unpleasant reactions more likely.

Although the initially high blood levels of THC fall rapidly over the first 30 minutes, further elimination occurs more slowly. It takes approximately 19 hours for one half of the initial level to disappear.[25] While repeated use results in an accumulation of cannabinoids, blood levels do not accurately reflect concentrations present in the brain or other organs because the cannabinoids are readily distributed into tissues throughout the body. This is quite different from alcohol, for which blood levels do accurately represent those concurrently found in the brain. It also differs from other psychoactive drugs such as caffeine and nicotine, which are rapidly metabolized and completely eliminated, thereby making detection impossible only a few hours after intake.

Health Consequences

Although the major effects of marijuana are on behavior, the use of this drug is not without physiologic and somatic consequences. The acute cardiovascular effects of marijuana include transient increases in heart rate and blood pressure, although mild dizziness may also occur on standing because of a blood pressure drop (orthostatic hypotension). These effects, most likely attributable to THC-induced changes of autonomic nervous system function, are temporary and have no deleterious effects in the normal individual. However, it is theoretically possible that adverse consequences may occur in individuals with preexisting heart abnormalities such as atherosclerotic disease of the coronary arteries or congestive heart failure. Long-term users of marijuana may experience salt retention and an increased volume of blood plasma,[26] but data regarding adverse clinical effects related to these changes are lacking.

In normal or asthmatic individuals, the immediate effect of inhalation of marijuana smoke is the opening of the upper lung airways. For some smokers, however, the particles in the inhalant act as an irritant, causing constriction of these airways. Furthermore, in chronic users, airway obstruction does occur.[27] Pharyngitis, sinusitis, bronchitis, and asthma have been reported in heavy smokers, particularly hashish users.[28] There is recent evidence that smoking marijuana results in much higher carbon monoxide levels in the blood and tar deposition in the lung than use of a similar quantity of tobacco.[29] Unfortunately, most studies that have attempted to examine the long-term effects of marijuana use in humans have been confounded by the fact that the subjects being investigated also smoke tobacco cigarettes. Data regarding potential for cancer are inconclusive, but the presence of cancer-causing agents in marijuana smoke and abnormalities in the lining of the lungs known to be the precursors of lung cancer in tobacco users make this an important subject for future study.

Concern regarding the impact of marijuana on fertility arises from studies of men who are heavy users and who experience diminished sperm motility and production of sperm counts, both reversible effects.[30] Animal data show that marijuana interferes with ovulation and causes a decrease in circulating pituitary hormones.[31] However, no evidence exists to directly implicate marijuana as a cause of infertility in adolescents.

There remains some question as to whether long-term use of marijuana may adversely affect immunity. Recent research raises the possibility that marijuana use may result in lowered resistance to disease.[32]

The most clearly established effects of marijuana are behavioral changes, which are mediated through the central nervous system. Although earlier studies suggested that brain volume may be reduced by marijuana, this research was later found to be methodologically flawed.

Marijuana does induce neurochemical changes in the brain; however, these do not appear to have any deleterious neurologic outcome. Although a temporary effect on brain neurotransmitters has been demonstrated, no long-term toxic effects on production of these neurotransmitters have been observed. The effects of the drug

upon brain electrical activity, as measured by electroencephalogram, occur acutely during use, but disappear with discontinuation of the drug. They probably affect susceptibility to epileptic seizures.

The major deleterious effects of marijuana are behavioral rather than somatic. The extent of behavioral effects is usually directly related to the concentration of marijuana used, although the personality of the user, his or her expectation of the effect, and the milieu in which the drug is used also have a contributing role. The popularity of marijuana arises from the euphoria, sense of relaxation, and increased visual, auditory, and taste perceptions low or moderate doses of the drug produce in most young people. Unpleasant emotional effects, called dysphoric reactions, may occur with larger doses. They tend to occur more often in adults, especially the elderly, but they can occur at any age, particularly in novice users and when intoxication occurs unexpectedly. Reactions range from mild fear to distortions in body image, depersonalization, disorientation, and even paranoia and acute panic reactions. Although delirium and hallucinations have also been reported, these extreme reactions should raise suspicion that phencyclidine has been mixed with the marijuana, an event that often occurs without the user's knowledge.

Similar to alcohol, the drug has a major effect on performance of tasks related to coordination. Lack of hand steadiness, decreased postural stability manifested by an increase in body sway, and an inaccuracy in the execution of various movements are observed with doses commonly used in social settings. The capacity to follow a moving object (tracking) is adversely affected by even very low doses and may persist after the sensation of intoxication has passed. Studies, still inconclusive, have demonstrated an increase in reaction time and a diminished ability to detect a brief flash of light, effects that may be due in part to a lack of sustained attention. Time perception is altered so that subjects under the influence of moderate doses of the drug consistently overestimate the amount of time that has elapsed. Even minor impairment in tracking ability, reaction time, time sense, and visual perceptual functioning have obvious and important implications for everyday situations such as driving an automobile or operating complicated machinery.

Marijuana also seems to exert a major effect on learning and memory. Short-term memory, especially when it is heavily dependent on attention, such as during information acquisition and storage, is significantly affected even by a single moderate dose. Problem-solving skills that are acquired while using the drug are reduced, learning takes place more slowly, and "state-dependent" learning occurs. The latter phenomenon is an interesting situation wherein material that is learned while under the influence of the drug is best remembered in the state of drug intoxication in which it was originally learned. Even though information acquisition does occur, the quality of the learning experience is diminished because the data or skills learned in the drug-intoxicated state are reduced or impaired.

Individuals under the influence of marijuana have trouble organizing their thoughts and stories, utter shorter phrases, speak more slowly, and use irrelevant words in their conversation. These factors have an obvious negative effect on oral dialogue.

An "acute brain syndrome," or delirium, may occur in chronic, heavy users of marijuana. It includes an impairment in ability to sustain attention to environmental stimuli and to maintain goal-directed thinking or behavior, memory or orientation impairment, perceptual disturbances, and changes in sleep pattern, psychomotor activity, or both. The symptom complex unfolds over a brief period of time and fluctuates rapidly. It disappears between several days to several weeks after discontinuation of the drug.

The "amotivation syndrome" consists of loss of energy, apathy, absence of ambition, loss of effectiveness, inability to carry out long-term plans, problems with concentrating, impaired memory, and a marked decline in school or work performance. The evidence for a causal relationship between marijuana use and the amotivation syndrome remains equivocal, as evidence is available only from case reports, and similar symptoms are also seen in individuals who have not used marijuana. Furthermore, many troubled individuals use drugs as a way to escape from their problems; thus, marijuana use may be a result of preexisting behavioral problems rather than the cause.

"Flashbacks," hallucinatory phenomena that have been consistently described but are without a pharmacological explanation, seem to occur in some users of marijuana. However, most individuals who experience them have a prior history of LSD use, and there may be a connection between the marijuana use and LSD flashbacks.

Marijuana produces pharmacologic tolerance after several days of regular use; thus, it is not surprising that a clinical withdrawal syndrome occurs with discontinuation of the drug. Symptoms, which are in the main restricted to chronic users, include irritability, agitation, insomnia, and electroencephalographic (EEG) changes. They peak at 30 hours after marijuana use has been discontinued and disappear without specific therapy within 3 to 4 days.

The only objective sign of intoxication with marijuana is conjunctival injection ("red eyes"), although as noted previously, there may be mild tachycardia and orthostatic hypotension. The clinical diagnosis of marijuana intoxication is based upon a constellation of behavioral symptoms, and is

confirmed by history or laboratory evaluation.

Laboratory Evaluation

Blood testing is available and plasma levels correlate with the individual's degree of exposure. Marijuana and its products are broken down by the liver and may be detected in the urine within an hour after the drug has been smoked; however, results from urine testing may be quite variable and subject to misinterpretation. For an infrequent user, the test will usually remain positive for several days. Metabolites may be stored in the fatty tissue of heavy users, and a urine assay in these individuals may show a positive result as long as one month after cessation of use.

Treatment Considerations

There is no specific treatment recommended for acute reactions to marijuana other than reassurance for individuals who become anxious or undergo a panic reaction. Talking to these people in a calm, nonthreatening manner in a tranquil milieu can often be quite helpful.

Cocaine

Epidemiology

National surveys of high school seniors show that cocaine use decreased from 9 percent in the class of 1975, to 6 percent in the class of 1992. Cocaine use is occurring among males and females, among college-bound and noncollege-bound students, and among teenagers in many different geographic areas.

The growing popularity of cocaine use among adolescents can be attributed to a combination of several major factors: (1) the increasing popularity of cocaine among the adult population, including its use by famous athletes, entertainers, business executives, and professionals who serve as role models for youngsters of all ages; (2) the perpetuation of cocaine's image as a chic, upper-class, nonaddictive, relatively harmless intoxicant that produces a sensational "high;" (3) the abundance of cocaine supplies, and at reduced prices, which has made the drug more accessible; and (4) the appearance of "crack" on the illicit drug market, which has provided adolescents with direct access to smokable cocaine freebase, a highly addictive form of cocaine, at a price almost any teenager can afford.

Pharmacology

Cocaine hydrochloride powder is the most popular form of cocaine available in the United States. It is a white, crystalline substance typically sold on the illicit drug market in gram units, ranging in price from $75 to $100 per gram. Heavy users may purchase cocaine supplies in larger quantities and at reduced prices, either by the ounce (approximately 28 grams), "quarter" (approximately 7 grams), or "eighth" (approximately 3.5 grams).

Cocaine hydrochloride powder is readily absorbed into the bloodstream via the nasal mucosa. Thus, nasal inhalation or "snorting" is an effective and popular route of cocaine administration. Because it dissolves in water, cocaine hydrochloride can be administered intravenously. When cocaine and heroin are mixed together in the same syringe, the drug combination is known as a "speedball."

Cocaine powder is not smokable because the active drug decomposes at the temperatures achieved by a match or cigarette lighter. However, using a simple chemical procedure, the powder can be readily transformed into a smokable form of the drug known as "freebase" or "crack." The procedure can be performed quickly and cheaply using baking soda, heat, and water. Freebase and crack are synonymous. Crack is not a new drug, but a new way of packaging and selling freebase cocaine. Before the appearance of crack, anyone who wanted to smoke cocaine freebase had to buy cocaine powder and then perform the chemical conversion process themselves. The selling of crack on the illicit drug market makes the smokable cocaine freebase directly available to the consumer. Crack (and the way it is packaged) is especially attractive to adolescents for several reasons. Smoking generates an instantaneous and extremely intense euphoria or "rush." This stems directly from the highly rapid and efficient absorption of cocaine through the lungs, into the bloodstream, and directly to the heart. Crack is sold in very small dosage units of ready-to-smoke "rocks" that cost as little as $5 or $10 each, placing the drug within financial reach of almost any teenager. These rocks are dispensed in tiny plastic vials that are easily concealed and convenient to carry. Smoking cocaine is invariably perceived by potential users as less invasive, "sick," or dangerous than injecting it, although there are actually few differences between the results of these two methods of administration in terms of absorption, magnitude of drug effects, and addiction potential. Not only does smoking cocaine have a more benign connotation than injecting it, but many potential crack users already have experience and familiarity with other inhalable drugs (e.g., marijuana and nicotine), which further reduces the barriers to experimentation with crack.

Cocaine is extracted from the leaves of the coca plant, *Erythroxylon coca*. Cocaine has three principal pharmacologic actions: it is a local anesthetic, a peripheral nervous system stimulant, and a potent brain and brainstem (CNS) stimulant.

The psychoactive use of cocaine by humans stems from the drug's ability to chemically alter brain function and thereby induce feelings of stimulation and euphoria. Cocaine's effects on the CNS are complex and its mechanism of action is not well understood. Cocaine stimulates selective areas of the brain. When used intermittently, it releases specific chemical messengers, dopamine and norepinephrine, from the nerve cells. It also inhibits the cells from

reabsorbing these chemicals and breaking them down (called "inhibition of reuptake"). These messengers, called "transmitter substances," accumulate at nerve endings where they can continue to cause increased nerve firing. Chronic use eventually leads to depletion of dopamine and other neurotransmitters. These neurochemical changes caused by chronic use may be the physiological explanation for compulsive cocaine use and addiction.[33]

Health Consequences

The mood-altering effects of cocaine are especially appealing to adolescents. Cocaine produces intense feelings of euphoria, energy, and confidence. In the early stages of cocaine involvement, users often feel more talkative, sociable, adventurous, and sexual. Cocaine can instantly overcome shyness, awkwardness, boredom, stress, sexual inhibitions, and low self-esteem. For many, it is the ultimate escape from negative mood states. Cocaine use is often referred to as "partying" by those who have come to expect good feelings and decreased inhibitions from cocaine. These are highly attractive benefits to many adolescents, particularly those who may look for any opportunity to celebrate and "let loose."

A pattern of escalating cocaine use and dependency is promoted to some extent by the drug's unique pharmacologic properties. The "high" is extremely pleasurable, but short-lived, leading to a pattern of repeated dosing at short intervals in order to maintain the desired mood state. As usage becomes regular and intensified, the brief euphoria is followed immediately by an unpleasant rebound dysphoria, or "crash," that leaves the user feeling uncomfortable and desiring an immediate return to the euphoric state. The crash from cocaine typically leads to the abuse of alcohol and other sedative-hypnotics, as the user attempts to alleviate the unpleasant feelings. As tolerance to cocaine develops, many users find themselves "chasing" the original high, which is vividly remembered.

Both tolerance and dependence occur with chronic cocaine use. Decreased intensity or disappearance of the cocaine-induced euphoria usually occurs with repeated doses, particularly when there is a pattern of intensive use. Larger doses may temporarily override an existing tolerance to these effects, but at a certain point most intensive users no longer experience the cocaine-induced euphoria, irrespective of the amount of drug that is taken.

Dependence on cocaine is evidenced by a loss of control over use, urges and cravings for the drug, and continued use despite adverse medical and psychosocial consequences. There is usually no dramatic physical withdrawal syndrome associated with abrupt cessation of chronic cocaine use. Nonetheless, cocaine is still considered to be physically addictive since it produces significant biochemical changes in brain activity that appear to give rise to cravings and urges that propel compulsive drug-taking behavior.

The notion that cocaine is psychologically but not physically addictive is no longer considered valid by most drug experts. The greatest danger of cocaine, by far, is its high addiction potential. Even in reasonably stable, well-functioning adolescents, cocaine may acquire control of the user's behavior.

Serious physiologic and other bodily consequences tend to be uncommon in cocaine users, even in high-dose, chronic users. Death rates from cocaine use are low, despite publicity suggesting the contrary. However, potentially fatal toxic reactions to cocaine do occur; these include brain seizures, stroke, respiratory arrest, irregular heart rhythms, and high blood pressure. The most common types of medical problems stemming from cocaine use are usually related to the route of drug administration. Intranasal users may experience a runny nose, sinus headaches, nasal congestion, nasal sores, and nasal bleeding. Chronic freebase smokers may experience chest congestion, wheezing, and sore throat from inhaling the hot cocaine vapors. Intravenous users tend to experience the most serious drug-related medical problems, resulting mainly from their use of needles. As with problems caused by other intravenously abused drugs, these problems include abscesses at injection sites, inflamed heart muscle and liver, and exposure to AIDS.

The most obvious and severe consequences of chronic cocaine use are behavioral, psychological, and social dysfunction. Unfortunately, cocaine use often is not evident until the problem has progressed to the point of serious abuse and dependency. Early warning signs are rarely present or recognized, except when the adolescent is actually found to possess or be using cocaine. Common symptoms in regular or intensive users may include mood swings, irritability, short temper, depression, memory impairment, chronic lassitude, erratic sleep patterns (insomnia and/or excessive sleeping), social withdrawal, and loss of interest in school, hobbies, sports, and family. More severe symptoms may include paranoia, ideas of suicide, and violence. As the user becomes increasingly obsessed with cocaine, all other aspects of functioning tend to deteriorate.

Cocaine abuse during pregnancy has been associated with an increased rate of spontaneous abortions and stillbirths related to abruptio placenta. Although increased birth defects have been demonstrated in mice, the relationship of cocaine to these abnormalities in humans remains unclear. Current evidence would suggest an increase in malformations, in particular, bony skull defects. Babies born to addicted mothers have been noted to demonstrate depressed interactive behavior, difficulty with arousal, and irritability once aroused. The

relationship of these observations to subsequent neuropsychological problems remains unproven. An increased rate of unexplained sudden death during the first month of life has been suggested but remains unconfirmed. To date, no specific neonatal withdrawal syndrome requiring pharmacologic therapy has been described.

Laboratory Evaluation

Cocaine can be detected in urine and blood. However, because cocaine is rapidly metabolized, reliable detection of the drug requires sophisticated testing methodology (such as enzyme-immunoassay or radioimmunoassay procedures), which can yield accurate results for up to 48-72 hours after cocaine use.

Treatment Considerations

Treatment of severe overdose reactions may require heroic measures, including respiratory assistance and a life-support system. Physiologic compromise is often complicated by the presence of other drugs. No specific pharmacologic agent is available to counteract cocaine.

Treatment of cocaine addiction is best conducted within the context of a highly structured chemical dependency treatment program. The program should include: (1) immediate, total abstinence from cocaine and all other mood-altering substances; (2) individual, group, and family counseling; (3) supervised urine testing at least two to three times per week; and, (4) the application of specific relapse-prevention techniques.

Most cocaine abusers do not require hospitalization, since there is no withdrawal syndrome that necessitates intensive medical management. However, inpatient treatment may be needed when there is: (1) physical dependency on sedatives/hypnotics or alcohol; (2) suicidal, violent, or psychotic behavior; and (3) inability to achieve abstinence despite outpatient treatment. There is no known effective pharmacotherapy for cocaine dependence. Experimental trials with a variety of agents, including antidepressants, lithium, bromocriptine, and other medications have yielded promising but inconclusive, inconsistent, and unimpressive findings. None of these trials has been conducted in adolescents. The most effective treatment programs combine professional interventions with self-help focusing on behavioral and attitudinal change, development of a drug-free lifestyle, and maintenance of long-term sobriety.

Inhalants

Epidemiology

Inhaling volatile gases such as nitrous oxide or ether for their mind-altering effects was quite popular among adults in the nineteenth century. However, abuse of inhalants by adolescents became a concern in the United States in the early 1960s, with the epidemic of glue sniffing among children and young teenagers. Through the 1970s and 1980s, other volatile substances and aerosols came into widespread use as inhalants.

Epidemiologic surveys of inhalant use are somewhat difficult to interpret because the wording of the questions is inconsistent from survey to survey. Some ask only about glue sniffing, whereas others include questions about inhalation of gasoline, other solvents, aerosols, and nitrites. The annual national surveys of high school seniors between 1975 and 1992 reveal that 16-19 percent of these young people consistently report inhalant use.[34] However, fewer than 3 percent of respondents reported using inhalants in the 30 days prior to the survey. Inhalant use appears to be more popular in the Southwest, especially among Pueblo Indian and Mexican-American adolescents.[35] Much of the inhalant use among young adolescents is experimental and it often occurs as a group activity. Substances such as airplane glue, gasoline, spray paints, aerosols used as propellants for deodorants, cleaning fluids, Scotch-Guard®, Freon, and typewriter correction fluid (for example, Liquid Paper®) are legal, inexpensive, and readily available. School authorities and parents are not likely to become suspicious when they encounter a 13-year-old with a can of deodorant.

Gasoline sniffing has been reported as a recreational behavior since the early 1970s, especially among children in certain ethnic and sociocultural groups. Several reports from the United States, Canada, and Australia document a very high prevalence of gasoline sniffing among native Indian or aboriginal children living in isolated areas.[36] In addition, the prevalence of this behavior is high among economically disadvantaged young adolescents, particularly those in the southwestern United States.

The volatile nitrites such as amyl, butyl, or isobutyl nitrite became popular in the 1970s among male homosexuals as enhancers of the sexual experience. Epidemiologic data specific to the adolescent population are rare in the literature, although less than 1 percent of 1992 high school seniors reported using nitrites within the 12 months prior to the survey. In one study, a survey of 173 13-22-year-olds in a long-term drug treatment facility, 43 percent admitted to having used isobutyl nitrite at least once, and 13 percent had used it 10 or more times.[37] A minority of these youths had used the drug in conjunction with a sexual experience; for those who did, it was heterosexual rather than homosexual intercourse.

Pharmacology

Inhalation is accomplished in a variety of ways. The volatile substance may be poured or sprayed into a plastic bag and inhaled from the bag. Liquid hydrocarbons such as solvents or cleaning fluids can be inhaled from soaked rags placed over the mouth and nose. Butyl and isobutyl nitrite are sold in small

glass bottles in "head shops" and pornography stores or by mail order, under street names such as "Rush," "Locker Room," "Bullet," "Quicksilver," and "Thrust." These drugs may be inhaled directly from the bottle. The prescription variety of amyl nitrite ("poppers"), used as a vasodilator in the treatment of angina pectoris, comes in a small glass vial that is crushed (popped) prior to inhalation.

The chemicals in most inhalants are rapidly absorbed in the lungs and exert their central nervous system effects within seconds, producing an altered mental state for about 5-15 minutes. Tolerance often develops in chronic users, but withdrawal symptoms are rare.

Health Consequences

Toluene is the most common hydrocarbon found in paints, lacquer thinners, and household and model glues. Inhalation of this chemical as well as other hydrocarbons has been associated with kidney and liver damage, peripheral nerve damage (numbness, tingling, and the like), convulsions, brain damage, and other central nervous system toxicity.[38] Sudden death associated with glue sniffing and, especially with the inhalation of aerosols such as freons (containing halogenate hydrocarbons), has been reported in a number of adolescents. These deaths are thought to result from the heart's becoming sensitized to epinephrine, which, in turn, results in irregular heartbeats. This mechanism is similar to what occurs with anesthetic agents used in surgery, such as halothane. The death is often reported to occur while the intoxicated teenager is running or very agitated due to hallucinations and is presumably experiencing an increase in the adrenal gland secretion of epinephrine.

Gasoline sniffing has been associated with poor motor coordination, abnormal motor movements (chorea), tremor, organic lead brain disease, liver damage, peripheral nerve damage, and muscular diseases. It is virtually certain that chronic gasoline abusers suffer neuropsychologic and intellectual deficits secondary to lead poisoning.

Trichloromethane, perchloroethylene, and trichloroethylene found in Scotch-Guard®, Carbona® spot remover, Liquid Paper® typewriter correction fluid, and some glues have been implicated in acute liver and kidney toxicity and also in sudden death from abnormal heart rhythms (cardiac arrhythmias).[39] King, et al., report the sudden deaths of four adolescents immediately after inhaling the vapors from typewriter correction fluid.[40] Toxicologic analysis revealed trichloromethane, trichloroethylene, or both, in blood samples from all four patients. None had ethanol detected in their blood. None showed evidence at autopsy of acute liver or kidney damage. The cause of all four deaths was thought to be from these cardiac arrhythmias.

Inhaling amyl, butyl, or isobutyl nitrite has been reported to cause headaches, rapid heartbeat, fainting, and low blood pressure due to the widening of the blood vessels.[41] These substances have also been associated with increased inner eye pressure. In addition, the nitrates and nitrites can affect the ability of hemoglobin in red blood cells to carry oxygen. As a result of suffering from a lack of oxygen (hypoxia), the patient's lips, nails, and ears may look bluish. People with glaucoma and with significant anemia who use nitrates are at particular risk; however, few deaths have been reported.

Laboratory Evaluation

Specific testing for most inhalants is difficult because of their rapid elimination and volatility. Because of the frequency of liver, kidney, and blood damage caused by these substances, however, complete blood counts, coagulation studies, liver function tests, and kidney function tests should be performed on all inhalant abusers. For gasoline sniffers, blood lead concentration should be determined since the blood lead level has been found to be elevated even in children who have sniffed gasoline only a few times.

Treatment Considerations

Treatment should be similar to that offered to adolescents with other substance-abuse problems. It should include, for those who are deeply involved, consideration of residential or community-based drug-treatment programs and family involvement. Chelation therapy is effective for tetraethyl lead toxicity from gasoline inhalation. Chelates are chemicals that can strongly bind with lead and carry it out of the bloodstream for eventual elimination in the urine.

Stimulants

Epidemiology

Amphetamines first achieved widespread use in the U.S. during the early 1950s, and were prescribed until recently for common conditions such as obesity, mild depression, and fatigue. Now, however, they are considered to have a high potential for abuse and are defined by the Drug Enforcement Administration as Schedule II controlled drugs. The only uses for which they are considered effective and indicated are narcolepsy and attention deficit hyperactivity disorder in children. Concurrent with the introduction of amphetamines as therapeutic agents was a surge in their popularity as drugs of abuse. Such abuse has ranged from occasional self-medication for obesity or fatigue to prolonged amphetamine binges. Amphetamines as drugs of abuse are known by a multitude of street names including "speed," "black beauties," "BAM," "ice," "crystal meth" (crushed tablets injected intravenously, sometimes with heroin), "mollies," "bennies," "splash," and "uppers."

The proportion of high school seniors who had amphetamines prescribed for them dropped from 15 percent to 7 percent between 1976 and 1982; however, the rate remained fairly constant through 1985, the last year for which these data were available. Currently, approximately 14 percent of high school seniors report some lifetime use of stimulants.

Another group of drugs, the amphetamine "look-alikes," has become problematic in recent years. These drugs, most of which contain phenylpropanolamine (PPA) or a combination of PPA and caffeine, are sold over the counter or through mail-order houses and are thus widely available. They are promoted as treatments for weight loss. When taken in large enough doses, they are capable of producing the "high" as well as the adverse side effects associated with the amphetamines.

Pharmacology

Amphetamine, a specific chemical (alpha-methylphenylethylamine), is the parent compound for the class of stimulants known as amphetamines, including DL-amphetamine (Benzedrine®), dextroamphetamine (Dexedrine®), and methamphetamine. A number of substances similar to amphetamine (called "analogues") also exist; these include benzphetamine hydrochloride, chlorphentermine hydrochloride, fenfluramine hydrochloride, phendimetrazine tartrate, and many others. All have properties very similar to those of the amphetamines. The amphetamine "look-alikes" mentioned above are actually sympathomimetic agents that affect the sympathetic nervous system, and whose chemical structure is quite different from that of the amphetamine analogues.

Although the mechanism of action of the amphetamines is not entirely understood, it is clear that these chemicals negatively affect the chemical messengers, called transmitter substances, that nerve cells send and receive to and from other nerve cells.

The amphetamines are well absorbed from the gastrointestinal tract, after which they undergo a chemical change (metabolism) in the liver. These accumulated and altered chemicals, called "metabolites," have been implicated in the development of the psychosis sometimes associated with amphetamine use. Finally, the unchanged amphetamines and the metabolized forms are excreted through the kidneys. They can be detected in the urine between 3 hours and 3 days after ingestion.

Health Consequences

Within approximately 30 minutes of ingestion by mouth, or 5 minutes following injection under the skin, amphetamines begin to exert their effects. Effects begin almost instantly after intravenous administration, and they are extremely intense.

Amphetamine use results in an initial "rush," or feeling of extreme exhilaration, that is followed by a more sustained period of euphoria, greater ability to concentrate, wakefulness, depressed appetite, self-confidence, and excitement. Preexisting fatigue or depression are immediately abolished. Tolerance quickly develops, and chronic users develop confusion, paranoia, headache, and depression. Many chronic users will have a history of weight loss, and may seem to be agitated or paranoid. Widened pupils, high blood pressure (hypertension), and a heart rate exceeding 100 beats/minute (tachycardia), are among the more frequent physical findings.

Manifestations of mild amphetamine toxicity include restlessness, irritability, insomnia, tremor, increased reflexes, sweating, widened pupils, and facial flushing. With increased dosage, the adolescent will experience confusion, high blood pressure, rapid breathing, and mild temperature elevation. With more severe toxicity, delirium, high blood pressure crisis, irregular heart functioning (dysrhythmias), seizures, coma, heart and blood vessel (cardiovascular) collapse, and death may occur. PPA, the "look-alike amphetamine," has been reported to cause high blood pressure, psychosis, and brain hemorrhage, although some controversy exists as to the extent of the effect. As with other drugs, intravenous use of amphetamines may be associated with the accumulation and lodging of talc or starch in the lung tissue and blood vessels (pulmonary granulomata or emboli), as well as with hepatitis and other infectious complications resulting from the sharing of unsterile needles.

Tolerance and physical dependence occur with regular heavy use of amphetamines, and an abstinence syndrome will occur upon cessation of their use. Depression is the most prominent manifestation of stimulant drug withdrawal. It reaches its peak 2 to 3 days after the last dose is taken. The mood swing may be so severe that it is accompanied by ideas of suicide or homicide. Exhaustion, prolonged sleep, and voracious appetite also occur; however, severe reactions such as seizures or death have not been reported.

Amphetamine psychosis, which usually occurs in chronic users, has also been reported to occur after a single large dose. This drug-induced psychosis may be confused with schizophrenia. The hallucinations that occur with use of these drugs are most often visual, tactile (false perception of touch or surface sensation), or olfactory (smells), as compared to the auditory (voices, noises) hallucinations associated with paranoid schizophrenia. Repetitive, stereotyped, compulsive behaviors (that are probably dopamine-related) are also observed in chronic users. Symptoms of psychosis begin to fade within a few days after cessation of drug use. The amphetamine analogues have also been associated with a drug-induced psychosis.

Limb deformities, narrowing of the bile system, and other birth defects have occurred in babies born to mothers who have used amphetamines during the first trimester of pregnancy. Furthermore, a neonatal withdrawal syndrome consisting of sweating, irritability, low blood sugar, tremulousness, and even seizures has been reported.

Laboratory Evaluation

Urine and blood assays for amphetamines are widely available and will remain positive for 2 days after the last dose.

Treatment Considerations

Manifestations of amphetamine overdose are often severe and life-threatening. If the drug has been taken orally, and the patient is awake, ipecac syrup, followed by activated charcoal and a cathartic (type of laxative) such as magnesium citrate, should be administered. A quiet environment with minimal external stimuli should be provided while elevated temperature and hypertension are treated. The central nervous system stimulant effects may be treated with chlorpromazine (Thorazine®) or droperidol (Innovar®). Chlorpromazine should be used only when the diagnosis of amphetamine toxicity is certain, as it is contraindicated in the treatment of the psychosis induced by phencyclidine (PCP) and the hallucinogens.

Treatment of the abstinence syndrome from stimulants includes several days of professional support and protective supervision within a hospital environment. Pharmacologic detoxification is unnecessary.

Hallucinogens

Epidemiology

Naturally occurring hallucinogenic substances have been used in certain cultures for thousands of years, mainly in religious ceremonies. Members of the Native American Church use peyote, a cactus plant containing mescaline, believing that it enables them to commune more easily with God. In a similar fashion, native populations of Mexico use mushrooms containing the hallucinogen psilocybin in their religious rites. Lysergic acid diethylamide (LSD) is the potent hallucinogenic drug that became popular in the United States during the "psychedelic era" of the 1960s. LSD does not occur naturally and was first synthesized in 1938 at Sandoz Laboratories in Switzerland.[42]

When hallucinogenic substances first came into widespread use in the mid-1960s, a small but significant number of young people used them daily or almost daily. Today, however, these drugs are largely used on an experimental basis—once, or at most a few times, a year. The prevalence of adolescents who have ever used a hallucinogen also appears to be decreasing. In 1979, 18 percent of high school seniors had tried a hallucinogenic substance; by 1992, this had decreased to 9 percent, and only about half of these students had used a hallucinogen within the past year.[43]

Pharmacology

The hallucinogens probably exert their effects by modifying neurotransmitter pathways in the brain. Psilocybin and LSD have chemical structures similar to the naturally formed brain neurotransmitter serotonin. Mescaline and synthetically made STP are similar to neurotransmitters. Other hallucinogens derived from plants, such as deadly nightshade and jimson- ("Loco") weed, act on the neurotransmitter acetylcholine and are used by some adolescents for their mind-altering properties.

LSD is the most potent hallucinogen. It is effective orally in minute doses (30-50 micrograms per dose). Mescaline is 4,000 times less potent, and psilocybin is approximately 100-200 times less potent than LSD.[44] Most of these hallucinogens are sold as tablets or powders. However, LSD, which is easily dissolved, is often sold absorbed onto a piece of blotting paper ("blotter acid") and is ingested, paper and all. Psilocybin can also be ingested in the form of "magic mushrooms" that have been gathered in the wild or cultivated indoors.[45] Drug effects begin 40-60 minutes after ingestion and peak 3 or 4 hours after the drug is taken. Effects of the drug may last up to 8-12 hours. The most striking effect of LSD and similar hallucinogens is a dramatic alteration in visual perception. Colors seem brighter and are often split into the full spectrum so that objects appear to have rainbows around them. The shape and size of objects are distorted, and their boundaries seem to shift and dissolve. Synesthesia, a mixing of senses, is common, and users often say that they can visualize music as a series of colors and shapes. Most users realize that these perceptual changes are caused by the drug and can remember them when the "trip" is over. Thus, they are not true hallucinations but "pseudohallucinations" or illusions. Very high doses of these drugs, however, can produce frank, visual hallucinations. Accompanying these visual perceptual distortions are mood changes, feelings of depersonalization, and some, usually minimal, bodily symptoms such as tremors, dizziness, nausea, and tingling. The emotional reactions to the drug experience can vary from panic to a transcendental feeling of union with the universe. Tolerance appears to develop with frequent use of any of the indole- or catechol-type hallucinogens but this tolerance is short-lived, disappearing after a week or two of abstinence.

The hallucinogens such as jimsonweed or nightshade produce a different syndrome of intoxication with many more physiological disturbances due to their peripheral as well as central effects on the nervous system.[46] Users experience true visual hallucinations and have

no concurrent awareness that they are drug-induced. Because of this, panic, combative behavior, and disorientation are much more common than with LSD. In addition, signs of peripheral anticholinergic effects are prominent; these include widened pupils, flushed face, dry mucous membranes, heart rates exceeding 100 beats/minute, and, in some cases, fever, high blood pressure, urinary retention, and convulsions.

Health Consequences

The toxicity of the indole- and catechol-type hallucinogens appears to be mainly psychological. Used under controlled conditions such as religious ceremonies or laboratory experiments, they appear to be quite safe from a physiologic standpoint. However, it is essential to remember that the purity of "street drugs" is always in question. The naturally occurring hallucinogens such as mescaline are very expensive, and on the illicit drug market, misrepresenting such substances with the less costly and more potent LSD or PCP is the norm.

The adverse psychological effects of the hallucinogens occur in three areas. Panic attacks during the height of the drug experience (a "bad trip") are common. Individuals can become quite distraught and are at risk for accidents unless they are supervised and protected by lay or medical caretakers. Psychotic reactions may be precipitated by the drug experience, often in people with significant psychiatric difficulties prior to the drug ingestion. These psychoses often require long-term treatment. There have been occasional reports of suicides during drug-induced psychosis. A disturbing effect that has been reported with hallucinogens is the "flashback," an unwanted repetition of the drug experience without the ingestion of drugs. Flashbacks seem to occur during times of psychological stress and diminish in frequency and intensity the longer the individual refrains from using hallucinogenic drugs.

LSD has not been shown to cause birth defects in humans despite the "chromosome breakage" publicity of the late 1960s. Nonetheless, it is prudent to recommend abstinence from any recreational drug during pregnancy.

The anticholinergic hallucinogens appear to have more potential for physiologic harm for several reasons: (1) effects may last for days rather than hours; (2) the intoxicated person is disoriented, cannot be reasoned with, and must usually be physically restrained; and (3) large overdoses can cause convulsions, severe high blood pressure, or coma, with collapse of the breathing mechanisms in the brain and lungs.

Treatment Considerations

Acute intoxication with LSD or other indole- or- catechol-type hallucinogens should be treated by removing the individual to a quiet, nonthreatening environment and "talking him down," that is, repeatedly reassuring him or her that these experiences are drug-related and that they will eventually disappear. Agitation and panic can be treated with an antianxiety agent (benzodiazepine) or haloperidol (Haldol®). Flashbacks often require only reassurance or a mild tranquilizer. The adolescent with flashbacks should be cautioned to avoid not only hallucinogens but also marijuana and antihistamines, which can trigger these experiences. Prolonged psychotic reactions require psychiatric intervention.

Treatment of anticholinergic-type hallucinogen intoxication (also called "atropine poisoning") requires hospitalization because of the long-lasting mental effects of these drugs. Washing fluids out of the stomach with a tube (gastric lavage) is indicated in all cases, even if the ingestion occurred hours or days prior to medical treatment, because of the markedly decreased gastric motility associated with atropine poisoning. Intravenous fluids and urinary catheterization may be required. Sedation can be achieved with an antianxiety agent (benzodiazepines) or barbiturates. Phenothiazines, such as Thorazine®, should be avoided because they can add to the effects of the hallucinogen. Physostigmine, which counteracts hallucinogens, should be reserved for life-threatening overdoses.

Phencyclidine (PCP)

Epidemiology

It is difficult to quantify the use of this illicit, hallucinogenic substance since many users themselves do not know that they have taken it. On the street, PCP is often sold as mescaline, THC, or psilocybin, and it is frequently used as an adulterant in other illicit products. The latest National Institute on Drug Abuse (NIDA) survey of substance abuse among teenagers indicates that 3 percent of high school seniors in 1992 reported hallucinogen use and that many of the hallucinogens probably contained PCP.[47] In a recent study among 202 general adolescent clinic patients at an urban children's hospital, 18 patients were found to have a positive urine test for PCP. All of these adolescents also had cannabinoid metabolites in their urine. None of the 128 patients without cannabinoid metabolites in their urine had a positive urine screen for PCP. The concordance between a self-reported history of use and confirmatory urine test was higher for marijuana use than for PCP, 91 percent versus 11 percent, suggesting to the authors the possibility that the adolescents were smoking PCP without knowing it.[48]

Phencyclidine was first used illicitly in 1967 in the Haight-Ashbury district of San Francisco, where it was sold as the "PeaCe Pill." It soon developed a bad reputation because of its propensity to cause "bad trips," and use declined. In the mid-1970s, new marketing strategies such as dusting the substance onto a leaf mixture for

smoking, and misrepresenting PCP as other, less available, substances, led to greatly increased use, especially in large cities. By the early 1980s, PCP was being described as the most frequently used hallucinogen in the United States.

Most of the users are between 15 and 25 years of age. Phencyclidine is sold on the street as PCP, "Angel Dust," "Crystal," "Elephant (Monkey) Tranquilizer," "Hog," "Super Grass," "Angel Mist," "Peace Weed," and many other "brand" names. In addition, users often purchase PCP under the assumption that they are obtaining mescaline or another hallucinogen.

Pharmacology

Phencyclidine hydrochloride (1-[phenycyclohexyl] piperidine hydrochloride) was developed in the late 1950s by the Parke Davis Pharmaceutical Company as an anesthetic agent with the brand name Sernyl.[49] It initially seemed promising because it produced analgesia and sleep without causing respiratory or cardiovascular depression. A related drug, often used in pediatric anesthesia, is Ketamine®. The psychotoxic effects of PCP, however, made it unsuitable for use in humans, and, for a while, its only legitimate use was in veterinary medicine as a primate anesthetic called Sernylan®. This drug was taken off the market in the late 1970s, and all the PCP now available is illegally manufactured. It is easily and inexpensively made by anyone with a rudimentary knowledge of organic chemistry. PCP is available as a white, crystalline powder that is readily soluble in water or alcohol. It can be dissolved and injected intravenously; snorted intranasally; ingested in food, beverages, or as pills; or, most commonly, sprinkled (dusted) in powdered form over dried parsley, oregano, or marijuana leaves and smoked.

The route of administration determines the timing of onset of drug effects. Effects are felt within seconds of an intravenous dose, within 2 to 5 minutes after smoking or snorting the drug, and within 30 minutes of ingesting it. Maximum effect of the drug usually occurs 15 to 30 minutes after smoking or two to five hours after ingestion. The effects of PCP can last 12 hours or more, and drug-induced psychosis can last up to a month.

Chemically, PCP is structured as a base so that it is rapidly absorbed in the small bowel. More than 50 percent of the drug is rapidly metabolized to apparently inactive substances and excreted in the urine within 12 hours. If the urine is acidified from pH7 to pH5, the PCP clearance rate from the kidneys into the urine increases one hundred times.[50]

Health Consequences

In low doses (1-5 Mg), PCP produces a feeling of euphoria and disinhibition with emotional lability much like drunkenness.[51] Moderate doses (5-10 Mg) lead to a body-wide anesthetic effect with supersensitivity to sensations and impaired perceptions, often resulting in panic reactions. Large doses (more than 10 Mg) can produce a toxic psychosis indistinguishable from schizophrenia, with paranoia and auditory hallucinations and either excitement or stupor. Massive overdoses can result in coma, seizures, muscle breakdown, and, very rarely, cessation of breathing. Smoking or snorting the drug produces rapid effects and allows the user to control the dose better, thus increasing the chance of avoiding toxic complications. Toxic reactions requiring medical attention more commonly follow ingestion rather than inhalation of PCP.[52] However, both passive (i.e., infants and children of abusers) and active smokers of the drug occasionally require treatment for acute short-term psychosis and also may require medical attention for accidents that have occurred during an altered state of consciousness.[53] It should be remembered that PCP is a potent analgesic; even if they are severely wounded, intoxicated individuals feel no pain.

The major effects of PCP, other than its effect on the mind, are sympathomimetic (heartrate exceeding 100 beats/minute, high blood pressure, increased reflexes); cholinergic (constriction of the pupils [miosis], flushing, and increased sweating); and cerebellar (vertical and horizontal eye movements, slurred speech, and poor coordination). Mental status can vary widely, from an excited, delirious, violent state to an unresponsive, calm, blankly staring state, to coma. The intoxicated individual experiences altered vision and the sensations of numbness and analgesia, auditory or visual hallucinations, dysphoria (emotional state composed of anxiety, depression, and restlessness), paranoia, and disorientation. Very high doses of PCP have been associated with coma, irregular heart rhythms, muscle rigidity, abnormal posturing associated with severe brain damage, and muscle disintegration, leading to acute kidney failure, seizures, and death.[54]

Phencyclidine crosses the placenta and has been detected in the urine of newborn infants whose mothers had taken the drug up to three weeks prior to delivery.[55] Neonatal symptoms are similar to those occurring in mothers who have used opiates and include jitteriness, excessive muscle tone, and vomiting. The potential for birth defects from the drug has been suggested but not proved. Accidental intoxication in infants and young children has been reported with increasing frequency since the late 1970s. High blood pressure and increased muscle reflexes are uncommon in children under 5 years of age. The most frequent symptoms of PCP intoxication in young children are lethargy, involuntary eye movements (nystagmus), and a spasm in which the head and heels are bent back and the body is bowed forward (opisthotonos).[56] These nonspecific symptoms often resemble those of inflammation of

the lining of the brain or spinal cord (meningitis), brain tumor, seizure disorder, and other types of drug ingestion; thus, screening for PCP should be specifically requested in the urine toxicology screening.

Laboratory Evaluation

The best method of screening for PCP intoxication is a urine assay. One such assay, the enzyme-multiplied immunoassay technique (EMIT) is extremely sensitive for PCP in the urine. Urine can also be assayed for PCP by gas-liquid chromatography. The concentration of PCP in the urine bears little relation to the degree of impairment in the user, however, since the rapidity of excretion of the drug is variable and depends on the pH of the urine.

Treatment Considerations

Acute transient toxic psychosis caused by smoking or snorting PCP should be treated by protecting the individual from harm and minimizing the environmental stimuli. The patient should be placed in a dimly lit, quiet room. "Talking down" should probably be avoided. Antianxiety agents (benzodiazepines), such as Valium®, may be given for agitation: however, other antipsychotic drugs should be avoided as they may add to complications and have no proven effectiveness. If the patient has ingested PCP, induction of vomiting or "stomach pumping" (gastric lavage) is indicated since the drug is poorly absorbed from the acidic stomach. Acidification of the urine with either ascorbic acid or ammonium chloride will promote more rapid excretion of the drug and may be helpful in shortening the duration of symptoms.[57]

Opiates

Epidemiology

Opiates, particularly heroin and methadone, were major drugs of abuse among young people during the 1960s and early 1970s. While there has been a dramatic decline in the use of opiates since that time, a minority of young people continue to abuse them, and there has been a small but significant rise in use in recent years.[58] Any incidence of intravenous drug abuse, moreover, has become a matter of great concern in view of the relationship between such activity and acquired immunodeficiency syndrome (AIDS).

Pharmacology

The class of drugs called opiates includes morphine and codeine, which are actually derived from opium; heroin, oxycodone (in Percodan®, Percocet®, and Tylox®), and hydromorphone (Dilaudid®), which are semisynthetic; and methadone (Dolophine®), meperidine (Demerol®), propoxyphene (Darvon®, Darvocet®), and pentazocine (Talwin®), agents that are altogether synthetic. All of these drugs have an affinity to bind with specific nerve structures in the brain. The effectiveness of each drug depends largely upon how well it binds to the major central nervous system (CNS) structures.[59] Taken orally, the opiates are readily absorbed from the gastrointestinal tract.

Heroin is a white, bitter, crystalline powder. When obtained by the user, it is usually mixed with lactose, which serves as a filler to dilute the opiate. Other substances such as quinine or procaine are added to disguise the sweet taste of the lactose. The final concentration of heroin available to users varies from 1 percent to 20 percent, and a single dose may contain 1 to 20 Mg of heroin.[60]

By inhaling through the nose, or "snorting," the effects of the drug are felt in approximately 30 minutes. Snorting produces inflammation and redness of the nasal lining, which preclude it from being used more frequently than every 6 hours or so. "Skin popping," or injection just under the skin (subcutaneous), accelerates the onset of heroin's effects to 15 minutes. Intravenous abuse ("shooting up" or "mainlining") produces a very intense effect almost immediately.

In the liver, heroin is broken down into morphine. It is then excreted in the urine. Detoxification occurs rapidly; 90 percent of heroin is cleared from the body within 24 hours after administration. In the heroin addict, symptoms of an abstinence syndrome begin to occur approximately 6 hours after the last dose. In contrast, the effects of methadone, which is usually taken orally, begin within 30 minutes, and peak blood levels are reached in 4 to 6 hours. It is excreted quite slowly. The abstinence syndrome does not occur until more than 24 hours after the last dose.

Health Consequences

Although the major indication for the therapeutic use of the opiates is to relieve pain, the high potential for abuse of these drugs is related to their capacity to produce euphoria. Both of these effects are a result of activity in the brain. In addition to a direct pain-relieving effect, the opiates can also produce an altered psychologic response to pain, suppression of anxiety, and sedation, all of which contribute to pain relief.

The bodily consequences of opiate abuse are related not only to the action of the drug but also, and even more frequently, to the method of drug administration and the lifestyle of the abuser. The lack of germfree technique, the sharing of needles and syringes, and the presence of other agents mixed with the opiates, result in a number of common, and often quite serious, infectious complications. Skin infection, vein clotting and inflammation, heart inflammation, brain and lung abscesses, pneumonia, and hepatitis are among the infectious complications commonly encountered. Most recently, AIDS has become the infectious complication of intravenous abuse causing the greatest concern. Some 15,000 intravenous drug abusers in the United States have already been

diagnosed as having AIDS, and that number is certain to rise.

Among the consequences to the CNS secondary to opiate abuse is respiratory depression, due to the opiate's effect on the breathing center in the brain. With overdose, there is the potential for arrest of breathing. The cough center, also located in the same center of the brain (medulla), is similarly depressed, explaining the therapeutic use of opiates as cough medicines but representing an additional danger with overdose. Other possible reactions to an overdose include fluid in the lungs, an almost invariable feature, and low blood pressure, with the potential for collapse of the blood circulation and arrest of the heart and lungs.

Beyond those CNS consequences associated with an overdose is the potential for brain abscesses. Such abscesses, which are often multiple and microscopic, may result from the direct injection of bacteria into the circulation or they may be secondary to an infected heart sending bacteria to the brain. Nerves located in the spinal cord, anus, and back can become inflamed when individuals are reexposed to heroin after a period of abstinence. These complications are rare in adolescents. A more common complication in adolescents is local anesthesia or ankle or wrist drop caused by accidental injection into or adjacent to a peripheral nerve.

Possible heart and lung consequences of opiate abuse include fainting or dizziness upon standing. These effects usually do not occur with therapeutic doses of opiates or with amounts typically abused; however, as noted above, an acute opiate overdose may result in "circulatory collapse" and "cardiopulmonary arrest." A frequent consequence to the heart is infection. This may affect either the right or left side of the heart, the former being more common. Although bacteria, particularly *Staphylococcus aureus*, are most often the cause of this infection, fungal infections also occur and have a less favorable prognosis. This infected heart then sends waves or clumps of bacteria to the brain, spleen, kidneys, lungs, and bone. Lung infections and swelling, as noted above, are both rather constant components of an acute overdose reaction; another consequence of intravenous opiate abuse are an increase of high blood pressure in the lung system. There can also be an accumulation of nontumor masses, which the lungs produce as a reaction to the fillers and impurities that have been mixed with heroin and circulated in the blood at the time of injection.

Among the stomach, intestine, and liver (gastrointestinal) effects of opiate abuse is a delay in stomach emptying time, which can result in ulcers in the first part of the intestine near the stomach (duodenum). Constipation is also very common. Tolerance does not develop to these gastrointestinal effects. The most frequent serious complication of opiate abuse is infection of the liver (viral hepatitis). The majority of intravenous abusers will eventually suffer a bout of viral hepatitis. Although in some cases this episode will be hard to detect, a minority of patients will experience a sudden and severe course of poor liver functioning, coma, and possibly death. More commonly, opiate abusers develop a chronic, persistent hepatitis, which does not appear to require treatment.

Although opiates actually decrease libido, increased rates of sexually transmitted diseases are seen in drug-abusing adolescents, probably because of a lifestyle that often includes prostitution or promiscuity. It should be kept in mind that a positive test result for syphilis (VDRL) may be due either to true infection or to a "false-positive" test. The female opiate user may frequently experience lack of menstrual periods or monthly release of eggs from the ovaries. These young women experience a low rate of pregnancy despite their sexual activity. The disturbance of menstruation and ovulation probably occurs as a result of the effect of heroin on the secretion of prolactin, a hormone. Menstruation and ovulation will resume faster after drug use is terminated if the opiate had been used for a shorter period of time. With abstinence, these adolescents will regain fertility and require contraception to avoid unwanted pregnancy.

The addiction to opiates appears as the amount, frequency, and duration of drug abuse increases. Although no exact formula can be defined for the development of addiction, it is clear that even the therapeutic use of daily opiates over a period of weeks may result in an abstinence syndrome upon withdrawal of the drug. Heroin and methadone show the same symptoms upon withdrawal; however, with methadone, the onset does not occur until 24 to 48 hours after the last dose, while with heroin, symptoms usually occur within the first day. The "opiate abstinence syndrome" begins with yawning, restlessness, increased eye tearing, insomnia, and runny nose, then progresses to widened pupils, goose flesh, sweating, flushing, rapid heart beats, high blood pressure, tremors and twitching, and later, muscle cramps, fever, nausea, vomiting, and intestinal hyperactivity with diarrhea. Seizures, one of the most severe manifestations of withdrawal, are quite rare in adolescents.

Women who have abused opiates during their pregnancies experience relatively higher rates of spontaneous abortions and stillbirths, and their infants are very often born small for gestational age. Maternal drug withdrawal during pregnancy, particularly during the third trimester, may increase the risk for fetal death. A well-described abstinence syndrome, beginning from several hours to six weeks after delivery, occurs in infants born to addicted mothers. The symptoms will show earlier or later and be more or less severe depending on the specific drug used (methadone

withdrawal occurring later than heroin), the total daily dose used, duration of addiction, and the time of the last maternal dose. Symptoms range from mild irritability and feeding difficulty to seizures.

Laboratory Evaluation

Urine testing for the presence of opiates is widely available in most medical centers. Several techniques will detect opiate metabolites for several days after a last use.

Treatment Considerations

As noted previously, acute opiate overdose may result in respiratory depression, lung swelling, and arrest of the heart and lungs. Resuscitory efforts would include intubation and the administration of oxygen under pressure. The acute toxic effects of an opiate may be inhibited by the administration of naloxone. Large doses and continuous administration may be necessary, especially in cases of methadone intoxication in which the period of toxicity may be prolonged.[61] In such circumstances, naloxone therapy may be required for as long as a full day. As the duration of action of naloxone is much shorter than that of methadone, therapy should not be discontinued as soon as the patient regains consciousness. Relapse into coma may occur if naloxone therapy is discontinued prematurely. An X-ray of the chest should be performed to look for lung infections (pneumonia) or fluid in the lungs. Antibiotics are given when either of these is present.

Many adolescents will briefly experiment with heroin or methadone and not go on to addiction; nonetheless, these drugs must be considered highly addictive, and addiction to opiates predicts continued deterioration and death. Adolescents who become addicted face a prolonged and even lifetime battle to achieve abstinence in which detoxification is but the first step. Treatment of the abstinence syndrome is aimed at maintaining patient comfort and preventing the rare but severe effects such as seizures. Detoxification should be viewed as preparation for entrance into a dependency treatment program. Few patients will continue to abstain from opiate use after detoxification without the benefit of therapeutic support. A variety of detoxification methods have been employed, including acupuncture, pharmacologic withdrawal, and abrupt cessation of drug use with behavioral support. Currently the most frequent method of detoxification involves the administration of methadone in a single daily dose of 30 to 40 Mg, with that dose being reduced in 5 Mg amounts over time. By this method, abstinence can be attained in 7 to 10 days. An alternate method is the administration of diazepam in a dose of 10 to 15 Mg every 4 to 6 hours for 3 or 4 days. Although this method has the advantages of avoiding the use of a substitute narcotic and more rapid detoxification, it is less likely to remove all symptoms of withdrawal and, hence, is less well tolerated by adolescent addicts.

The long-term treatment of opiate addiction has primarily involved two modalities: drug-free therapeutic communities and methadone maintenance treatment programs. Drug-free therapeutic communities vary in their approaches but most often share common themes of total drug abstinence, behavior modification, and self-help directed by ex-addicts rather than by behavioral professionals. A typical treatment course would require 12 to 18 months of residence within the therapeutic community, followed by day treatment support subsequent to graduation. Few adolescents are able to tolerate prolonged confinement in a therapeutic community and, even for those who stay, their ability to remain abstinent and to recover following discharge is not good.

An alternative method of treatment for opiate addiction is methadone maintenance. These treatment programs administer a daily dose of a substitute narcotic, methadone, in combination with supportive services and behavioral intervention. As methadone can be taken once daily by mouth and has a more prolonged and less intense effect than heroin, clients in these programs can resume normal activities and pursue educational and vocational goals. The original hope that opiate addicts could thereby stabilize their lifestyles and eventually be detoxified and remain abstinent has not been realized. Although many young people will achieve some success in remaining relatively drug-free while on methadone maintenance, eventual detoxification and abstinence has been an overly optimistic goal. At the present time, methadone maintenance must be viewed as a potential lifelong therapy and, therefore, should not be a treatment of first resort for most young people.

Sedatives And Hypnotics

Epidemiology

The sedative/hypnotic drugs subject to abuse include the barbiturates, such as phenobarbital and secobarbital ("reds"), amobarbital ("blues"), pentobarbital ("yellow jackets"), methaqualone ("ludes" or "sopors"), and glutethimide ("goofballs"). Ethinamate and methyprylon are other drugs designed to promote sleep that have potential for toxicity, addiction, and abuse. Approximately 6 percent of high school seniors in 1992 reported some lifetime use of a sedative/hypnotic.

Barbiturates were first used in medical practice at the beginning of the twentieth century. Although still widely prescribed as sedatives, they have been largely supplanted by the benzodiazepines and other drugs. Methaqualone was introduced into the United States in 1965, and was touted to be a safe,

nonaddicting, nonbarbiturate with a low potential for abuse. These claims were soon proved wrong. In fact, methaqualone clearly did cause physical dependence, and it rapidly became a major drug of abuse, having earned a reputation for producing a greater "high" than the barbiturates and for being an aphrodisiac. Although methaqualone is now a Schedule II drug, and most manufacturers have suspended production, "bootleg" forms are still available.

Pharmacology

Barbituric acid, a substance with no influence on central nervous system activity itself, is the parent compound for all the barbiturates. The barbiturates do not leave the body after the effects are gone because they can be stored in the fatty tissue. Those barbiturates that are faster but shorter acting, and cause more sleepiness are stored easier in the fat. Barbiturates are classified as long-acting, 12-24 hours (e.g., phenobarbital); intermediate-acting, 8-10 hours (e.g., amobarbital); short-acting, 4-8 hours (e.g., pentobarbital); and ultrashort acting, 3-4 hours (e.g., thiopental).

The barbiturates are rapidly absorbed by mouth or injection just under the skin, after which they are either detoxified in the liver or excreted unchanged in the urine. Elimination is delayed in infants, pregnant women, and patients with diminished kidney or liver function. The barbiturates exert their action on the CNS by slowing down nerve firing, so that messages take more time to be sent to different parts of the brain. Because the brain matter that contains nerves has a high fat content, the rapidly acting barbiturates are quickly taken up by the gray matter, and sleep is induced within minutes. Methaqualone is rapidly and completely absorbed by mouth, reaching peak levels within 1 to 2 hours. Glutethimide is slowly and erratically absorbed after oral use, except when it is taken with alcohol, which dramatically increases the rate of absorption. It is highly soluble in fat and becomes distributed into brain and fat tissue rapidly. Most of the drug is detoxified by the liver, with less than 2 percent excreted unchanged in the urine.

Health Consequences

The CNS effects of the sedative/hypnotic drugs range from mild sedation (sleepiness) to general anesthesia. All of these drugs produce some level of drowsiness, although tolerance to this effect develops over time. The individual who abuses barbiturates will often display slurred speech, a short attention span, emotional ups and downs, rapid involuntary eye movements, and poor coordination. Methaqualone produces effects that may be mistaken for alcohol inebriation. Patients will have slurred speech, an unsteady gait, impaired judgment, and poor impulse control. The user of glutethimide and other nonbarbiturate sedative/hypnotic drugs may exhibit sedation as well as the effects described above. While intoxicated, the abuser of sedative/hypnotic drugs is at risk of bodily injury and accidents as well as subject to poor performance at school or at work.

While tolerance to the physical and psychological effects does occur at normal doses, no tolerance develops to an acute lethal dose, thus making overdose common. In patients suffering from acute intoxication, the barbiturates exert their depressive effects on a variety of systems. One manifestation is decreased awareness, ranging from drowsiness to coma; this may be followed by breathing, heart, and blood vessel collapse and death. Fluid in the lungs and lung infections due to the breathing in of vomit or food (aspiration pneumonia) are occasionally encountered. Narrowed pupils, diminished or absent pupil and other eye reflexes, abnormal temperature regulation (very low temperatures occurring early, with very high temperatures occurring later), and decreased stomach and intestinal movement with delayed stomach emptying time are also seen.

Overdose with methaqualone may cause features that are quite different from those produced by the other sedative/hypnotic drugs, including a variety of muscular changes such as increased reflexes, lower tone, jerking, and twitching. One can also witness shivering, and, occasionally, seizures.[62] Severe toxicity will produce coma, very reduced breathing, and increased fluid in the lungs. The symptoms of glutethimide intoxication are similar to those for barbiturates, except that there are often cyclic fluctuations in the depth of the coma, which can be prolonged. Glutethimide acts as an "anticholinergic," so that widened pupils, urinary retention, thick and sticky lung secretions, and dry mouth may also occur.

Other bodily consequences are caused by the intravenous abuse of sedatives. Tablets and capsules are dissolved in water and injected under unsterile conditions and frequently contaminated with particulate material. Skin and subskin infections and hepatitis, as well as talc and starch masses in the lung, may develop. In some cases, the blood pressure then increases in the lungs, putting more strain on the heart.

The sedative/hypnotic drugs are highly addictive. The dose and period of use necessary to induce tolerance and addiction vary with each barbiturate. On the average, however, addiction develops within 1 to 2 months of regular daily use of 500 Mg or more. Addiction to methaqualone has been reported in adults after the use of 2 grams daily for as little as one month. Glutethimide and all of the other nonbarbiturate sedatives produce tolerance and addiction with persistent use.

The abstinence syndrome (symptoms that occur when stopping these drugs abruptly) with the sedative/hypnotic drugs is quite

serious and, in fact, can be life-threatening. Anxiety, restlessness, tremors, insomnia, abdominal cramps, nausea, and vomiting are the earliest symptoms of withdrawal. These usually begin between 12-16 hours after the last dose of a short-acting barbiturate or glutethimide. After 24 hours, the patient has hyperactive reflexes and dizziness on standing. If left untreated, symptoms peak at 48-72 hours, with the onset of hallucinations, delirium, and generalized seizures. The longer-acting barbiturates are associated with the same reaction pattern, but the symptoms are delayed. Seizures may not occur until 1 week after the last dose.

Withdrawal symptoms occur after 3 to 5 days of abstinence in the individual who is addicted to methaqualone. Symptoms include headache, poor appetite, abdominal cramps, abnormal sleep patterns, and, in the most severe cases, seizures.

The barbiturates freely cross the placenta, resulting in equal maternal and fetal plasma concentrations. Fetal abnormalities have been reported with barbiturate use during pregnancy. Withdrawal symptoms may occur in neonates born to women who use these drugs during the third trimester of pregnancy. Little is known regarding consequences to the fetus of a woman who has used methaqualone or glutethimide during pregnancy.

Laboratory Evaluation

Plasma and urine testing are widely available for the qualitative and quantitative detection of barbiturates. Most medical facilities routinely use such testing to determine therapeutic levels of these drugs and are able to supply the information needed to diagnose suspected abuse or a drug overdose.

Treatment Considerations

The objective of the initial management of a patient who has taken a toxic overdose of a sedative/hypnotic drug is to prevent further absorption of the drug. This is of particular importance since movement through the stomach and intestines is reduced in these patients, allowing continued absorption for hours or even days. An alert patient who is being treated soon after an ingestion may be given ipecac syrup. This is followed by administration of activated charcoal and then a specific laxative such as magnesium citrate. The comatose patient or one with any respiratory embarrassment will require intubation with a cuffed endotracheal tube to prevent aspiration and maintain a patent airway.

The medical treatment for overdose is very complicated and should be done in an emergency room or hospital ward.

Anticipation and treatment of the abstinence syndrome are essential. Any individual who has used 500 Mg or more of barbiturates daily for at least 1 month, and all patients with a history of a seizure disorder who use any amount of sedatives regularly, should undergo detoxification on an inpatient unit. Phenobarbital is used in gradually tapered doses until the patient is drug-free. When seizures occur from barbiturate withdrawal, they will usually be unresponsive to antiseizure medications and must be treated with barbiturates. Thorazine® (chlorpromazine) is not given because of its tendency to put the patient at risk for seizures. The individual addicted to methaqualone should also be detoxified with phenobarbital, but it can be accomplished over a brief period of time, usually within 3 to 5 days.

Tranquilizers

Epidemiology

Tranquilizers, including the benzodiazepines and meprobamate, are the most prescribed group of drugs in the United States. There has been a relatively low but consistent rate of experimentation with and use of these drugs within the adolescent population;[63] more important, however, is that these drugs, particularly diazepam (Valium®), are widely prescribed and readily available to young people.

Some other medications that are commonly prescribed are Xanax®, Halcion®, Centrax®, Ativan®, Serax®, and Librium®.

Pharmacology

These medications have many pharmacologic and toxic properties that affect the central nervous system (CNS) in a similar fashion. After oral ingestion, the benzodiazepines are all readily and rapidly absorbed from the stomach. They can all be stored in the fatty tissues to different degrees but they tend to be widely distributed into other body tissues.

The benzodiazepines are changed and made ineffective in the liver; however, it is interesting to note that there is no connection between how fast the drug is removed from the body and how long it acts on the brain. These medications act on a specific brain transmitter that influences muscular relaxation.

Meprobamate is readily absorbed from the gastrointestinal tract, reaching a peak concentration within 1 to 2 hours after ingestion. Most of the drug is changed in the liver and excreted in the urine. It shares many pharmacologic and clinical properties with the barbiturates.

Health Consequences

The benzodiazepines are potent antiseizure agents and muscle relaxants. Drowsiness, poor coordination, dizziness, and weakness are common side effects, even at therapeutic doses. In addition, impairment of both psychomotor performance and memory can occur with their use.

The benzodiazepines are effective for the treatment of anxiety and insomnia and they are prescribed frequently, more often in adults than adolescents, for this purpose. Until recently, diazepam was the most

widely used prescription drug in the United States. If these agents are rapidly absorbed, then euphoria more likely occurs, which explains the potential for abuse by teenagers.

The most outstanding feature of benzodiazepine overdose is sedation. Other effects are numbness and tingling, blurred vision, slurred speech, and involuntary eye movements. There is little or no effect on blood pressure and breathing when these drugs are used orally. Acute intoxication and collapse of breathing are more likely to occur when the benzodiazepines are taken with alcohol or other depressants than when the drugs are taken alone. This is not only because the effects are additive but also because alcohol increases the rate of absorption of the benzodiazepines. Paradoxical reactions consisting of agitation do occur, but rarely.

The benzodiazepines that take longer to eliminate from the body, such as diazepam or flurazepam, tend to produce cumulative sedation. This is partly offset because tolerance to the medication occurs, leading to less drowsiness. Physiological dependence does occur, and an abstinence syndrome may begin as long as 5 to 8 days after the last dose of the longer elimination time and continue for several weeks. For those benzodiazepines with a relatively short elimination time (e.g., oxazepam, lorazepam, alprazolam, or triazolam), the withdrawal syndrome begins more rapidly. The mildest symptoms of withdrawal are insomnia, sensitivity to light and sound, and irritability; these may progress to tremulousness, sweating, muscle twitching, rapid heartbeats, high blood pressure, confusion, and seizures.

When meprobamate was released in the 1950s, it was promoted as a muscle relaxant; however, it has been found to be relatively ineffective for this purpose and is now mainly used as a tranquilizer and hypnotic. Allergic reactions, destruction of red and white blood cell production, and poor blood clotting have all been associated with the use of meprobamate.

Meprobamate toxicity is manifested by vomiting, numbness, tingling, unstable pulse and blood pressure, coma, and convulsions. Profound and persistent low blood pressure as well as heartbeat irregularities may occur after large ingestions. The occurrence of abstinence syndrome following abrupt cessation of chronic use of high doses of meprobamate is similar to barbiturate withdrawal and may include seizures, coma, and death.

Benzodiazepines cross the placenta and accumulate in the fetus. There is some evidence that their use during the first trimester of pregnancy may result in increased risk of oral clefts. There have been reports of heart, brain, palate, and limb abnormalities in babies born to mothers who have used meprobamate during pregnancy, but a direct cause-and-effect relationship has not been proved.

Laboratory Evaluation

The benzodiazepines and meprobamate can be measured in blood and urine.

Treatment Considerations

Treatment of overdose in the conscious patient consists of the administration of ipecac syrup to empty the stomach, and the use of activated charcoal, followed by a cathartic such as magnesium citrate. If the patient is comatose or otherwise severely compromised, breathing and blood circulation support may be necessary.

The abstinence syndrome is treated by reinstituting the benzodiazepine and slowly tapering dosage over a 1 to 2 week period. In instances of addiction to meprobamate (that is, when it is known or suspected that the patient has been taking large doses of 3 gms or more daily for at least 2 months), either meprobamate or a barbiturate should be used for detoxification, proceeding as one would for barbiturate withdrawal.

Designer Drugs

According to the estimate of the Drug Enforcement Administration (DEA), the newest billion-dollar industry in the United States is designer drugs.[64] These drugs are created in the laboratory by making changes in the chemical structure of drugs of abuse. They are designed and manufactured in makeshift laboratories and sold at great profit for recreational use. The advantages to sellers and users are that most modified drugs are technically not illegal until they can be identified, evaluated, and placed on Schedule I or II (lists of dangerous drugs whose distribution need to be controlled) by the DEA.[65] In addition, many designer drugs are stronger and cheaper than the substance from which they are derived.

Designer Opiates

Modifications of the drugs meperidine (Demerol®) and fentanyl came to attention on the West Coast in the late 1970s, when several unexplained deaths were traced to overdose of 2-methylfentanyl.[66] This compound is an exceedingly powerful opiate. The more recent derivative found on the illicit market is 3-methylfentanyl, a drug that is 2,000 times as potent as morphine. In 1986, it had been responsible for at least 12 deaths in San Francisco.

Sloppy and uncontrolled manufacturing processes pose great dangers to consumers of designer drugs. MPPP is a designer modification of meperidine. If the manufacturing process is not strictly controlled, a significant amount of a contaminant, MPTP is formed, however. MPTP will poison the nerves, especially in the centers of the brain where it causes irreversible Parkinson's disease.[67] The first designer drug catastrophe was identified in 1982, when a group of young drug addicts in California

suddenly developed severe Parkinsonism due to this contaminant.

Designer Euphoriants

Two other new drugs that are chemically related to both hallucinogens and stimulants have recently appeared. Called "Ecstasy" or "X," and "Eve," both drugs are modifications of methamphetamine. MDMA or Ecstasy began to be used legally by psychiatrists to facilitate psychotherapy in the 1970s.[68] Since 1983, it has become a recreational drug popular on college campuses. In July 1985, MDMA became a controlled substance and was placed on Schedule I by the DEA; however, it is still readily available on the illicit market. In oral doses of 100 Mg, it is reported to induce euphoria and enhanced self-awareness. It does not induce hallucinations or visual perceptual distortions. Since 1985, MDMA's legal replacement has appeared on the street in the form of MDEA, or Eve. This drug is reported to have effects similar to but milder than Ecstasy.

In a recent survey, 39 percent of a randomly selected group of 369 Stanford University students reported having used Ecstasy at least once, and many students had taken it five times or more.[69] To date, there is no documentation of use of these drugs by high school students, but it can only be a matter of time before such reports begin to appear.

While Ecstasy and Eve are thought to be quite safe by recreational users and by psychotherapists, a recent paper from Dallas has documented five deaths in association with them. The patients ranged in age from 18-32 years, and included four men and one woman.[70] In three of the deaths, the drug may have contributed to the induction of irregular heart rhythms in individuals with underlying heart or lung disease. One death was apparently due to bizarre and risky behavior resulting in an accident. In the fifth person, MDMA was thought to be the immediate cause of death.

Many drug-abuse experts fear that the current situation with respect to designer drugs may be only the beginning of a much more serious problem. Once illicit marketers begin chemical production in garages and kitchens across the country, the demand for imported drugs derived from plants may decrease, and regulation of the flow of illicit drugs will be much more difficult.

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